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ABSTRACT

This study examines six factors in the relation between the objectives of Philippine higher education and those of the country's economic planning, and then derives implications for future development of higher education in the Philippines. An analysis of the Philippine socioeconomic framework as a whole draws a profile of the country's economic history, demographic characteristics, and current development strategy. Factors affecting the development of the whole educational system, including enrollment trends and administrative policy, are then identified, and the consequences of the expanding educational system on the absorptive capacity of the labor market are noted. Citing the characteristics of the present labor force, the authors estimate the demand for and supply of highly qualified labor, and make suggestions for improving educational planning for employment purposes. The qualitative factors of student aspirations and expectations are also examined through a survey of the university admission requirements, student backgrounds, chosen specializations, sources of funding, career objectives, and reasons for abandoning career objectives. Studies of two further influences in the employment process--employees' perceptions of the employment situation (its relation to training, for example, and the degree of job mobility) and employers' views of the labor pool (including recruitment problems and hiring criteria)--draw out the relationships between types and levels of education and job market offerings. Finally, implications are noted for the reform of educational planning in order to improve the employment outlook for university graduates. (JW)

INTERNATIONAL INSTITUTE FOR EDUCATIONAL PLANNING

HIGHER EDUCATION AND THE LABOUR MARKET IN THE PHILIPPINES

BIKAS C. SANYAL
WALDO S. PERFECTO
ADRIANO A. ARCELO

ED232248

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Higher Education and the Labour Market in the Philippines

BIKAS C. SANYAL
WALDO S. PERFECTO
ADRIANO A. ARCELO

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PREFACE

This case study on higher education and the labour market in the Republic of the Philippines is part of a research project of the IIEP, undertaken during its last Medium-Term Plan (1973-78) under the direction of Bikas C. Sanyal, which was designed to explore the relationship between the development of higher education with the employability of the graduates in several countries. Similar studies have been undertaken in the Democratic Republic of Sudan, Zambia, Tanzania and Poland and their results have already been published.

These studies, as well as other activities in the research programme of the IIEP, reflect the increasing concern in educational planning with the relationship between education and employment; they could contribute not only valuable results for the countries studied, but also improve methodologies for studying similar problems in other countries.

The rapid expansion of education in the countries of the Third World has in some respects created as many problems as it has solved. At the higher levels of education, we often find a considerable discrepancy between the output of graduates in different specializations and the absorptive capacity of the labour market; unemployment and under-employment of certain types of graduates coexist with scarcity of certain other types of graduates. In qualitative terms, questions are being raised as to whether the content and performance of systems of higher education are meeting the changing needs of society, including the changes in methods of production and the labour market.

These discrepancies need to be assessed and analysed.

The high unit cost and opportunity cost in higher education, the particular social and political significance of universities and university students, and the responsibility of the higher education system in guiding and developing other levels of education make it imperative that a special effort be directed towards the exploration of possible means to correct them. The research project, of which this present case study is a part, attempts to contribute to this aim.

The analysis of the relationship between higher education and employment in the Philippines presents a particular interest due to some of the special features of its education system and its socio-economic environment: (1) the Philippines has the largest enrolment ratio in primary, secondary and tertiary levels of education among the Third World countries, (2) 90% of the institutions of higher education belong to the private sector; they are not subsidized from public funds and have to be financed mostly from student fees, which makes important the analysis of supply and demand relationships; (3) the country has an institutionalized machinery for overseas employment, although the services for national placement are inadequate, (4) the problem of unemployment of graduates differs in magnitude and nature for different specializations of the graduates, (5) the GNP per capita is low ($460 in 1979) and the distribution of wealth is uneven, (6) 70% of the population are under 25 years of age, with all the consequent implications for the educational system and the labour market, (7) there is widespread underemployment in rural as well as in urban areas, amongst graduates as well as non-graduates; at the same time there are many in the urban areas who take more than one job in order to increase their incomes.

Except for (1) and (2) above, most of the other characteristics of the education-employment phenomenon are common to many developing countries, so that the results derived from such a study may have some relevance for other Asian countries as well. Analysis of the relationship between higher education and employment covering both quantitative and qualitative aspects had not been undertaken in the Philippines so far, although several studies have examined the system of higher education alone. The ILO Report "Sharing in Development: a Programme of Employment, Equity and Growth for the Philippines" (1974) however contributed a great deal to sensitizing the national agencies for an in-depth study of the relationship between higher education and the world of work.

In designing the research, IIEP was fortunate to benefit from the co-operation of several national institutions, in particular the Educational Development Planning Implementation Task Force (EDPITAF) and the Fund for Assistance to Private Education (FAPE), which share the responsibility of the public and private sectors of higher education. These two agencies have been the principal co-ordinators of the study at the national level. The priority issues for research were selected by them in co-operation with IIEP, and the methodology of the research was also developed with national co-operation.

The results of this study were critically reviewed at a national Workshop held in Manila in July 1979 with the participation of politicians, academicians, administrators, students, employers and graduates, as well as two international reviewers. The study was revised on the basis of the suggestions received during the Workshop.

It is to be noted that since the study was presented at the Workshop, some of its recommendations are already in the process of implementation. As stated by the former Director of EDPITAF, the study has made an important impact on the country's policy on higher education. A follow-up study of the graduates is now being undertaken by FAPE, in co-operation with the IIEP.

It is our hope that the educational policy of the Philippines can benefit from the results of the study. The IIEP has been most fortunate in obtaining the full co-operation of all the concerned authorities in the Philippines in the preparation and conduct of the study, especially the EDPITAF, FAPE, Ministry of Education and the National Manpower and Youth Council, and most sincerely acknowledges their assistance. It is one of the important principles of the work of the IIEP that its research projects be conducted in such a way as to ensure the fullest possible involvement of the country's officials and professionals. Two of the authors of the present study are distinguished educationists of the Philippines. Dr. Waldo S. Perfecto, Assemblyman of the Republic of the Philippines, was formerly Director of EDPITAF, and later a Member of the Governing Board of IIEP. Prof. A. Arcelo is the Vice-President of the FAPE in the Philippines. Their great experience in the field of education has enriched the study significantly.

Costs of the study were shared by the national authorities and the IIEP. We are glad to express our gratitude to the Aid Agencies of Canada, Federal Republic of Germany, Norway and Sweden for their financial support to the IIEP, which has made possible the financing of this research project.

Michel Debeauvais
Director, IIEP

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We are grateful to all the members of the Policy Committee whose suggestions and guidance have been a source of much encouragement in our work. We are also grateful to Professors Gonzalo M. Jurado and Prof. Ernesto A. Franco for their valuable assistance in the preparation of the study. Thanks are due to Professor Ungku Abdel Aziz, Vice Chancellor of the University of Malaysia, to Dr. Vinyu Vichit-Vadakan, Director of the United Nations Asian and Pacific Development Institute, Dr. Edita A. Tan of the UP School of Economics, Dr. Dionision Tiongco, President of the Coordinating Council of Private Educational Association, Mr. Vicente Jayme, President of the Private Development Corporation of the Philippines, Dr. Emilio Javier of the UP College of Agriculture, Miss Lourdes Mangahas of the UP Collegian and Miss Cristina Infante of Ateneo de Manila University for their comments as reviewers of the study. We acknowledge also the recommendations made by the participants in the Review Workshop for the improvement of the draft version of the study. Thanks are also due to Miss Gloria Gavilla, Mr. Ernesto Balangue, Miss Noli Bringas and Miss Edith Rivera of NMYC; Mr. Magtanggol

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Bikas C. Sanyal
Adriano A. Arcelo

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Chapter 1

Objectives of the Research, the Methodology and Principal Findings

1.1 Objectives of the IIEP Research Project

Enrolment in third-level education in developing countries has increased fourfold during the period 1960-75. This increase in enrolment has also led to an increase in the number of graduates from institutions of higher education. Three factors may be identified as being responsible for the rapid expansion of higher education; first among them is the economic factor. In most Asian countries, the policy behind the development of higher education was to supply the economy as rapidly as possible with the educated manpower necessary to eliminate human resource 'bottlenecks' in expanding sectors. Many of the countries, having secured political independence during the last three decades, sought in the national interest to replace the many expatriates holding high-level decision-making positions in a wide range of public and economic services. The vacuum created by their departure led to an increased demand for the output from secondary schools to become university graduates or receive some technical or sub-professional training.[1] Therefore, emphasis on the development of higher education was necessary.

At this stage, with demand exceeding supply and attention focused on those types of higher education where graduates were in short supply, little thought was given to unemployment. The distribution of income and employment were implicitly thought to be problems that would be solved by rapid economic expansion and by the upward mobility of the poor through increased educational opportunities. At that time also, industrial development was favoured over agricultural development because agriculture appeared to be able to survive with unskilled labour, and because the planners and politicians thought that only dynamic industrial growth could absorb the masses of underemployed, especially in rural areas, and lead the economy into 'take-off'. It was also believed that this would sustain economic growth, increase consumption and improve the overall economic condition of the people. Economists were quick to argue that investment in human resources was a powerful factor for economic growth. The rates of return for such investment, although calculated very approximately and sometimes arbitrarily, showed that in terms of productivity the rate of return on educational expenditures was as high as—if not higher than —investments elsewhere. Thus, more and more money came to be invested in education with the institutions of higher education receiving a large share, a share justified by salary differentials that in turn were legitimized by educational differentials.

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[1] See Guy Hunter, *Education for a Developing Region*, George Allen & Unwin Ltd., London, 1963.

The reasons for expansion were also social and varied. For example, education for many of these countries has now come to be considered a basic human right. Also, the communications system having improved, the benefits of higher education were more readily perceived. Once children had received some education, they understood the benefits and demanded more. Most of the institutions of higher education charged very low fees, while the special economic incentives, and prestige and power attached to the jobs obtained by graduates with higher education, attracted more and more students.

There were also political factors responsible for expansion in higher education. To all countries, and to all regions within a country, an institution of higher education was regarded as a symbol of national or regional prestige. Economic criteria played but a small role in the establishment of many of the institutions of higher education, and employability of the output often played no role at all.

The rapid expansion of higher education has created as many problems as it has solved. Principal among these are:

(a) The lack of relevance of the content and structure of the system of higher education with respect to the national needs since in most of these countries the expansion did not include a consideration of needs which changed because of political independence from the former colonial rulers;

(b) lack of confidence on behalf of the key production sectors of the economy in the institutions of higher education, due to the absence of any interaction between the industries and the institutions of higher education;
(c) rural exodus because of the location of these institutions in urban areas;
(d) among the students, increases in expectations which could not be met; and
(e) most important, the mismatch in quantitative and qualitative terms between the output of the system and the absorptive capacity of the labour market. The latter has revealed itself in the problem of unemployment and underemployment among most of the university graduates, especially in the liberal arts. By contrast, in the professional fields, fewer graduates have been produced than were needed.

To be fair, the authorities of higher education have been partly handicapped by the problems of the operation of the employment market and its everchanging nature. It has been difficult for them to assess the absorptive capacity of the economy, due to difficulties in forecasting manpower needs. The principal difficulties surround the lack of information on:

(a) the resource potential of the country;
(b) changing technology and labour productivity;
(c) educational needs for different kinds of jobs;
(d) occupational mobility;
(e) attitudes and expectations of potential employees and employers; and
(f) the recruitment and promotion practices of the employers.

Even if such information were available, economic uncertainties would still prevail. However, these difficulties may be tackled only by making the system of higher education more flexible in order to cope with changing economic priorities.

It is in this context that the International Institute for Educational Planning launched a research project to relate the development of higher education within a country with the changing needs of the employment market, in both quantitative and qualitative terms, so as to improve the basis for planning the development of higher education in order to reduce the mismatch between the type of training offered by the institutions and the types of skills needed by the labour market. The objectives of the project were:

(a) to identify the role played by the education system in general, and the higher education system in particular, in the overall socio-economic development of the country and, conversely, the influence that the social, cultural and economic factors have exerted in the development of the education system;
(b) to identify the inconsistencies, both quantitative and qualitative, that have developed in the past in the education system and suggest measures to rectify them;
(c) to shed light on the main variables to be considered in formulating policies of intake to different disciplines and institutions;
(d) to focus on the factors that intervene in the implementation of such policies and suggest some ways to minimize the effects of these factors; and
(e) to develop a system of indicators to be used by national policymakers, university administrators, potential employers, and students, for decision-making.

The above objectives imply that an analysis of the quantitative aspects is not enough and the investigation has to consider the qualitative aspects, such as expectations of students, graduates and employers, as well as quantitative aspects such as manpower needs, trends of output of the educational system and their intakes, structure of the labour force, etc.

1.2 Framework of the Project

The phenomenon of interdependence between educational development and the overall socio-economic development of a country calls for an analysis of the resource potential in natural, physical and human categories. To develop each region in a balanced way, the development strategy of a country should take account of whatever natural resource potential is available in that region. The process of exploitation and the choice of technology will be determined inter alia by natural resource potential. The exploitation of these resources requires skills which must be provided by the education system. The way in which natural resources are exploited, therefore, influences the educational development strategy in structure and content. The utilization of resources is also dependent on the available and potential physical resources such as buildings, equipment, transportation and communication facilities. Development of these physical resources depends, in turn, on the development of education and vice versa. An analysis of physical resource potential therefore becomes an important task in ascertaining the role of education in the overall development strategy of a country.

In the analysis of the development of human resources, traditions, customs and beliefs cherished by the people cannot be ignored. Demographic changes influence the human resource potential as well. Education, for that matter higher education, has to be planned in such a way as to develop this human resource potential in order to respond to the needs of the social and economic development of the country, while considering the expectations and attitudes of the people. An analysis of human resource development therefore becomes imperative in the overall analysis of the relationship between higher education and employment.

The conditions of work, recruitment and promotion policy of the employment market influence the type of qualification that an employee would have. A full employment policy, on the one hand, has to guarantee a job for every individual. In countries where this policy does not prevail, employment is an objective of the individual. Therefore, the development of human resources becomes dependent on the operation of the labour market and the prevailing employment policy. The policy of human resource development for economic and social needs calls for an analysis of the skills needed for the various activities of the economy. The output of the education system, by types of skills taught, has to be known for proper utilization of the human resources it generates. Before the education system can be planned with respect to intake, content and structure, it is only logical that demands for such skills in quantitative terms be estimated beforehand to whatever extent possible. These estimates of demand, which traditionally have been called manpower demand, but in our conception are broader than that because of the consideration of the qualitative aspects, are susceptible to inaccuracy due to economic uncertainties and the changing nature of the perceptions, attitudes and expectations of the different segments of the society. However, some guidance is needed as to the direction that the development of education in general, and higher education in particular, should take in quantitative terms in order to cater to the future needs for skills so as to avoid unemployment or underemployment.

It is believed that these estimates, if properly prepared, can provide such guidance. These quantitative estimates of needs for skills can be checked with the actual values to identify the degree of inaccuracy and to form a checklist of missing parameters and variables. They are also useful for setting the foundation of a strategy for development of the structure and organization of the educational system.

It is assumed that where higher education is concerned estimates are easier to make because of the increased degree of correspondence between the skills imparted in the higher education system and the skills needed on the job, than for other levels of education. As regards the problems of estimating future needs for highly qualified manpower, an analysis of the match between the quantity of trained people and the quality of the training content demanded by the economy and the responsiveness of the institutions of higher education becomes particularly useful. This analysis of matching brings out the shortcomings of the education system not only quantitatively but also qualitatively. A careful diagnosis of the education system forms the basis of any future strategy for the higher education system and also provides a yardstick for achievements in restructuring the social system through change in the educational system, and it illuminates the problems encountered in achieving targets of socialization and equality of opportunities in the world of work. These problems may be seen in the various educational 'paths' of different population groups that result in different working opportunities in the labour market.

To identify those factors obstructing socialization and equality of opportunities requires a sociological analysis of the population, their perceptions, attitudes and expectations from the education system and from the labour market. This analysis must give details of such socio-economic characteristics as parental educational and income background, age, sex, region of home, type of school attended, etc.

An analysis of the problem of unemployment and underutilization of graduates in respect of the training received and the skills needed by the job can provide useful information for decision-making to improve the relationship between higher education and the world of work. This analysis would also involve a study of the process of employment and its effectiveness as perceived by the graduates and the employers.

An institutional mechanism for interaction among the students, their parents, the institutions of higher education, the graduates, the employers and the planners and decision-makers could also assist in improving such a relationship. A better match between the students' expectations and the admission policies of the institutions of higher education could result in better academic performance and better socialization. This could be achieved through the design of selection criteria which are more rational and a better counselling system.

A better match between the expectations and qualifications of graduates and the expectations and requirements of the employers could result in higher productivity, more job satisfaction, and less structural imbalance in highly qualified employees, along with the adoption of better employment procedures and selection criteria.

For the employers, the variables to be considered would be size of the enterprise, type of production or services offered, location, employment process, selection criteria, salaries and other benefits including housing, etc. A matching system among the different segments of society could be a useful tool to develop a 'fine tuning' procedure for constant revision of the higher education system and the labour market. Such a system would be able to take into account the changing technology, re-ordering of developmental priorities, changing structure of the education system, and changing perceptions, attitudes and expectations of the different segments of the society.

An attempt has been made in this project to go into as much detail as possible in following the above conceptual framework in the same sequence as the discussion above. Such research has to be interdisciplinary, involving economists, psychologists, sociologists, educationists and computer scientists. It also calls for an extensive data base, which will be discussed at a later stage.

It should, however, be noted that the problem of economic uncertainties, which are not solely due to factors within national control but which are also influenced by the international situation, cannot be resolved. Only the flexibility of the system of higher education can reduce the effects of such uncertainties. With these limitations in mind, the tasks involved in achieving the objectives of the project can be summarized as follows:

(a) analysis of the socio-economic framework of the country and the pattern of development of education in general and higher education in particular;
(b) analysis of the demand of the economy for skills and the supply from the higher education system in quantitative and qualitative terms by types of skill;
(c) analysis of substitution between occupation and education;
(d) analysis of expectations of students for different kinds of higher education and the reasons for the difference in popularity among different fields of study, the availability of career guidance facilities and their effects on influencing students' aspirations;
(e) analysis of expectations of the employers in respect of their job requirements, their promotion and recruitment practices, job description mechanism, and the salary structure, and expectations of the employed graduates in respect of the higher education system and jobs; and
(f) establishment of a set of indicators for improved interaction between the higher education system and the labour market for continuous adjustment in planning the development of higher education both quantitatively and qualitatively.

It is obvious that carrying out the above tasks cannot be the job of one specialist. It needs the cooperation of several agencies or research organizations. We shall discuss below how the study was organized for the Philippines and what role this particular country has played in the execution of this IIEP Programme.

1.3 The Role of the Philippines in the Project

That the decision-makers of the Philippines have been concerned with the problem of higher education and employment does not need much elaboration. A Presidential Commission was set up to concretize the reorganization of the system of post-secondary education of the country as early as 1970.[1] The reorganization had to take into consideration the relevance of the higher education system vis-à-vis the social needs. Subsequently, the Educational Development Implementation Task Force (*EDPITAF*)was set up by virtue of a

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[1] Report of the Presidential Commission to Survey Philippine Education (PCSPE), Manila, 1970.

Presidential Decree in 1972 to implement this reorganization on the basis of continuous monitoring of the system. As a result, a study[1] was undertaken to examine the validity of the State higher education system, which controls approximately 15 per cent of the total higher education system. Although State control of higher education is marginal in quantitative terms, it is quite significant insofar as the country's needs for professional education are concerned. The most recent study dealing with the employment problem in the Philippines was that conducted within the framework of the *ILO's* Comprehensive Employment Strategy Mission (*CESM*),[2] just after the reforms under Martial Law had begun. The recommendations made in the report were the subject of in-depth discussions among national agencies.[3] The part referring to education and human resource development deals with the recommendations in respect of education and employment and, although some of these recommendations were found to be not altogether relevant for the country's changing needs, the report contributed a great deal to sensitizing the national agencies to the need for an in-depth study of the education system in general and the higher education system in particular. It can be appreciated, however, that in an analysis of a comprehensive employment strategy, the emphasis on the higher education system alone has to be limited in scope. Many aspects of the complex relationship between higher education and the world of work had naturally been omitted in the report. It was, therefore, only natural that the national authorities were eager to undertake an analysis of the situation as outlined in the above framework, if for no other reason than to expand the knowledge-base on which decisions in respect of higher education and employment could be founded. *EDPITAF* therefore took the initiative of launching a joint study with the International Institute for Educational Planning, and cooperation from other distinguished agencies, such as the Fund for Assistance to Private Education (*FAPE*), National Manpower and Youth Council, the National Economic Development Authority, the National Educational Testing Centre, and the Bureau of Higher Education of the

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[1] "Towards the Integration of Higher Education in the Philippines", Final Report of the Presidential Study Committee on State Higher Education, Manila, March 1976.

[2] International Labour Office, *Sharing in Development: A Programme of Employment, Equity and Growth for the Philippines*, Geneva 1974.

[3] The reader is referred to the Report of the Workshop on *The Ranis Mission Report: A Re–evaluation*, National Manpower and Youth Council, Quezon City, 1975.

Department of Education and Culture, was forthcoming to give to the study its discerning importance.

In the analysis of the relationship between higher education and employment in the Philippines, some special features have to be taken into account. The Philippines has the largest enrolment ratios in primary, secondary and tertiary-level education in Asia. The universalization of primary education, which is considered a basic human right, has automatically led to a very high enrolment ratio in secondary level. Due to lack of employment opportunities after secondary education, the school-leavers have nowhere to go but to the institutions of higher education and, in that sense, these institutions perform a custodial function in addition to their usual role. The pressure on the institutions of higher education obliges them to expand programmes which are cheap to carry out without consideration of the needs for skills to be achieved from these programmes to equip the students for working life; this means opening up more liberal arts types of programmes and arts-based programmes. Although this custodial function does some good in the short run, it does create more serious problems resulting from unmet expectations of the college-leavers. After a long discussion with different national agencies, a list of issues to be considered in the study was prepared and these are given below.

(a) What role have the resource potentials in the country played in the development of the different sectors of the economy?
(b) How do the different economic sectors operate? What are their development prospects?
(c) What role do population characteristics play in the formulation of the education and manpower policy? Is education practised as a basic human right? Should work also be considered a basic right?
(d) What are the implications of the overall development strategy of the country for the planning of education in general and higher education in particular?
(e) What roles are played by the different levels and types of education in the overall socio-economic development of the country?
(f) How efficient and rational has educational development been in the past in respect of structure, content and cost of operation?
(g) What are the prospects for educational development in the

future? What role does employability of the output play in this development?

(h) What role does manpower planning play in planning for education?

(i) How is the employability of graduates estimated? What role do manpower forecasts play in this regard?

(j) How are the manpower forecasts made? How are they matched with the supply? What factors affect the supply?

(k) What are the selection criteria for higher education?

(l) What factors influence pursuit of higher education? How are individual expectations and attitudes reconciled with the national need for skills and capacity of absorption of the graduates in the labour market?

(m) What is the correspondence between expected and actual educational career?

(n) To what extent are content and method of instruction relevant to the needs of the job as perceived by the students, the graduates and the employers?

(o) What role does career guidance play in the choice of an educational and occupational career?

(p) What are the occupational and career expectations of the students? How are they determined? What is the degree of mismatch between expectations and achievements in respect of occupational career among the graduates?

(q) What is the prevailing degree of substitution between education and occupation? What role do educational and socioeconomic background play in this substitution as well as in the waiting period to get employment?

(r) What characteristics of the job are satisfying to the graduates as perceived by the graduates themselves and by the employers?

(s) What are the recruitment methods and selection criteria for a job and how relevant are they as perceived by the employers and the employees?

(t) What role does wage structure play in the selection of a job by a graduate? How are starting salaries fixed? What is the degree of correspondence between academic performance and job performance as perceived by the graduates and the employers?

(u) What are the alternatives to formal education for meeting the needs for skills to perform a job? How are they organized?

(v) In what areas of training could the employers, i.e. the consumers of education, and the producers of skills, i.e. the institutions of higher education, co-operate with each other to bridge the gap between training needed for performing a job effectively and the training offered by the institutes of higher education?

(w) What conclusions for policy in the field of higher education and in the employment market could be drawn from the results of the above analysis?

To answer the above questions, one could adopt different methodological approaches within the same conceptual framework of the research project. The alternative possibilities are discussed below and the rationale for choosing the approach adopted is also discussed.

1.4 Methodological Aspects

Three alternative methods were explored to tackle the above problems in the study, as follows:

1.4.1 LONGITUDINAL STUDIES OF STUDENTS, GRADUATES AND EMPLOYERS

This method assumes that a representative sample of each of the different sections of the society involved in the system of higher education would be selected. Their personal, social, economic and educational characteristics are noted over time so as to grasp the phenomena of interrelationship between the system of higher education and employment over time. Needless to mention, in the analysis the above-listed problem areas would have to be considered. Longitudinal studies essentially consider the cohorts of students, graduates and employers. Over time the samples should refer to the same populations of students, graduates and employers to allow for control of different characteristics from different cohorts, and to identify the effects of characteristics of the particular individuals in the analysis of the interrelationship. The difficulties encountered are:

(a) Such an operation becomes extremely costly, particularly in identifying the same individuals over a long period of time. As time passes, the nature of the sample changes substantially, violating the original assumption of retaining the characteristics of the same population.

(b) The decision-makers and planners have to wait for a long period of time to obtain the results of the analysis if they are to be of any use.

(c) With the time needed, the group of researchers, decision-makers and planners change their place of work so that retaining the same conceptual framework of the research and even the list of problem areas becomes difficult. One of the researchers of the U.S.A. who has adopted the longitudinal approach mentions that the whole team of researchers, except for himself, changed over time. It is very likely that even the leader of the team would change in a developing country within a five-year period and the whole research could fall through.

(d) Although the main argument in favour of the longitudinal studies has been to retain the characteristics of the population group studied over time, the changes in the socio-economic and political characteristics in a country influence greatly the characteristics of the population groups and so, in fact, the studies are considering different population groups over time.

However, what is more interesting in longitudinal studies is the revealing of the changes that occur among the same groups of people over time due to changes in the economy, politics and social characteristics of a country. Although perhaps not very useful for a decision-maker or planner at a particular point in time, the results may be useful for a researcher for theoretical purposes. For a developing country, the costs involved in tracing the same population group, the risk of changes in the team of researchers, changes in the composition of the decision-makers and planners make such an approach less acceptable.

1.4.2 ANALYSIS OF CENSUS DATA OVER TIME

The advantages of analysing census data are that this avoids sampling error. Generally, such data are collected by different national agencies for their own purposes. For example, the population characteristics could be available from the census of population, the characteristics of the labour force from the census of employment, and educational statistics would be available from the educational censuses. So, what the researcher has to do is to design the study so that answers to the listed problem areas could be available from the analysis of the census data. This would greatly reduce the cost of collection of data.

The disadvantages are:

(a) Not many developing countries have census data available on population, employment and education systems.
(b) The questions asked in censuses cannot give all the information needed for an analysis of the relationship between education and employment. The modification of the research design needed for adaptation with the census statistics may have to sacrifice analysis of important problem areas.
(c) Accuracy of census statistics has been very often questioned. Although the degrees of inaccuracy may not very severely affect the conclusions needed for policies in the area for which the census was conducted, analysis of such detailed issues as discussed in the conceptual framework could be seriously handicapped.
(d) Census data very rarely consider the attitudes and expectations of the different social groups, which, according to our framework, play an important role in matching the world of education with the world of work—not as yet recognized seriously by the planners of education and employment. In any case, if census data are available in respect of a particular population group, needed for the analysis of the relationship between education and work, they should be considered with whatever qualification needed.

1.4.3 ANALYSIS OF CROSS-SECTIONAL DATA OVER TIME: TRACER STUDIES ON THE PHENOMENON OF INTERACTION BETWEEN EDUCATION AND EMPLOYMENT

This approach identifies the most important population groups at a particular point in time, takes representative samples of the groups, and analyses the relationship (keeping in view the list of problem areas to be tackled at that point in time and assuming that the important variables and issues concerning the relationship between education and employment have been considered at the referred-to point in time) in order to provide tools for the decision-makers for adjusting the world of education with the world of work and vice versa. Such exercises are repeated over time to examine the role that time plays in the mechanism of interaction between the different factors of the world of education with those of the world of work. The exercises require each unit of observation of the samples to review its characteristics in retrospect and forecast its characteristics for a future point of time. This latter aspect and the aspect of repetition of the exercise over time are considered as tracing the phenomenon of relationship between education and employment over time. In the analysis, consideration is given to whatever secondary information is available on any of the characteristics—be they census data, survey data, or any descriptive analysis of the situation.

The disadvantages of this approach are:

(a) The individuality of the units of observation is lost.
(b) The scope for analyzing generalizable aspects of the relationship between education and work is limited. Too much emphasis is given to the list of problem areas concerning the researcher and the decision-maker of the country. Theoretical aspects of the relationship are not tackled very deeply.
(c) Too many issues are treated sometimes with superficial techniques particularly in respect of attitudes and expectations.
(d) Possibilities of repeating the same exercise in the same way after a period of time are limited.
(e) The exercise is more costly than the analysis of census data.

However, since this approach can (i) provide quick answers to some questions, (ii) provide a diagnostic analysis of the current situation to the decision-maker and planner, (iii) develop a data base with indicators to be used by the planners and decision-makers at a future point of time, and (iv) develop a team spirit of research work in different disciplines within a country with marginal assistance from the IIEP, it was accepted by the national team of researchers. The practical nature of the study, the simplicity of the analysis, the possibility of considering a large number of issues at the same time and the possibility of following up the situation over time convinced the research team to accept this approach for the Philippines. The following section gives the details of the rationale of the data base needed for the study and the methods of analysis.

In the analysis of socio-economic framework, we tried to identify the resource potentials in quantitative form. When data were not available we depended upon resource estimates and attempted to relate the resource potential with the actual role that the resource plays in economic activities. For example, if the country had a large resource of metallic ores, to what extent the primary sector of the economy was represented by that resource and to what extent this was processed indigenously could be either estimated in quantitative terms using simple indicators as ratios or percentages or in the absence of actual statistics, could be described on an ordinal scale. This information, however crude, could give us the possibility of examining whether skills provided in the formal system of education could contribute in the matching between the resource potential and actual exploitation.

The importance of the different sectors could be identified by their percentage share in the gross domestic product. Their use lies in assessing the contribution higher education could make in promoting the development of particular sectors or in diversifying the economy. Here, as well, we use simple indicators like ratios, compound growth rates etc. Similar indicators are used to analyse the characteristics of the population and their implication for education and manpower planning. If primary education is considered as a basic right, demographic factors are to be considered in the development of educational facilities within the country. If second level education is not oriented solely toward manpower needs, social demand will have an influence on the development pattern of second level education as well. This, in turn, would influence the development of higher education. It is in this way that population characteristics do affect education and manpower planning. The participation rates by age, sex, and home background would give us useful indications for formulating development policies of education.

If the country had a social and economic development strategy its effect on the educational development could be identified by the share of the budget for education. The skills needed for the development of the country and its regions could also be identified from the development strategy and new training needs could be recognized. This could be based on perhaps regional potentials for development and the available infrastructure. From the description of the development policies one could identify what kind of training activities would have to be provided by the education system.

From the inventory of training needs one could then go on to analyse the potential responsive capacity of the education system. To estimate this capacity one has to look into the strength and weaknesses of the existing system with a critical diagnostic analysis of the system. This diagnostic analysis could involve identifying the factors affecting the past developments and their rationality as compared with the objectives set in the development strategy mentioned above. Influence of socio-economic characteristics of different groups of people on the development of education are identified by simple cross tabulations, frequency distributions and trend analysis by each characteristic. Rates of wastage could be estimated and reasons identified to reduce these rates. One could also analyse the matching in the development of different facilities of the education system with the enrolment growth to check for the quality of instruction. An analysis of the validity of the examination system can also be made by checking the scores with performance in work in the case of school leavers. A correlation analysis would assist in finding the relation between educational performance and performance on the job. However, such analysis has to be broken down by different socio-economic characteristics of the student population, because we believe that not only formal educational but family characteristics influence the performance as well.

In the analysis of cost per student, both social and private, it is important not only to check the economic efficiency of an educational programme but also to find ways to reduce cost per student where it is irrationally high. With this diagnostic analysis of the operation of the present education system one would have the basis for the future development pattern of the education system. The future development strategy has to take into account the employability of the graduates; this is possible only from some estimates of needs for trained skills. Manpower forecasts alone are not reliable estimates. One can only make rough guesses from these estimates. However, an analysis of the effectiveness of the manpower plans becomes useful at this stage to provide the analyst with the degree of unreliability and the extent of need for other measures. To identify the employability of different types of graduates one has to analyse the structure of the existing labour force, the pattern of employment including recruitment and promotion practices, the wage policy, the labour productivity, and growths of different economic sectors (as analysed in the socio-economic framework), the policy of employment and the participation rates of different social groups in the employment market. In the traditional manpower forecasting methods only the sectoral economic growth rates and labour productivity are considered. In our case we could attempt to estimate the demand first by the traditional method, we shall estimate the supply of graduates following the flow rates in the educational system, and then we shall identify the order of magnitude of the influence of the "other" factors on the employability of the graduates and their supply.

The "other" factors which influence the supply of the education system include the system of admission to the institutions of higher education, the factors determining the pursuit of higher education by socio-economic characteristics of the students, the role of career guidance, the mobility of the students within the education system and the expectations of the students about the world of work. These expectations would include such characteristics of the job as the salary, the career possibilities and the conditions of work.

To identify the influence of each factor on the supply of graduates by fields of studies a set of hypotheses is developed to indicate the degree of association between the factor and a particular socio-economic characteristic of the student so that implications of this association for planning of education could be drawn. A representative sample of students is drawn from the population of students by a suitable sampling technique. A questionnaire survey is conducted among them to collect the data necessary for testing the hypotheses. The details of the sampling technique applied and the organization of the survey are given in Chapter 5. In this analysis we could apply the chi-square statistics. We could also use the analysis of correspondence. Due to absence of a suitable programme at the time of conducting the analysis we had to abandon the analysis of correspondence. This analysis is repeated for the graduates to cross check the relationship between the expectations of the students and the perception of the graduates.

The expected mobility of the students from education to jobs can be correlated with the actual mobility of the graduates. The latter also provides us with the substitution between specialization the graduate had in the education system and the specialization needed by the job. This also reflects the flexibility of the labour market in respect of educational needs. This also provides us with the indication of the flexibility of a particular educational programme with respect to the needs of the job.

One of the factors which would measure the employability of a graduate in a particular field of specialization is the waiting period of the graduate before the regular first job. In the absence of accurate information on unemployment of graduates, the waiting period serves a useful purpose.

The employability of a graduate also depends upon the relevance of the training received with respect to the needs of the job. The degree of usefulness of the training received to perform a job is supposed to indicate the degree of relevance of the training, as perceived by the graduates. This can also be checked with the perception of the employers and an analysis of concordance could be performed to indicate the degree of matching between the two perceptions. This information can help orient the programmes carried out in the institutions of higher education.

The estimation of employability of the graduates also depends upon the mobility of a graduate within the job. Estimation of this mobility can be made from the questionnaire surveys conducted among the graduates and reasons for the mobility can be identified. This will provide the employers with the necessary information to change the characteristics of the job and also for the institutions of higher education to modify the structure of the education system if the reason for changes in jobs was due to the mismatch of the training with the needs of the job. It is also useful to note what effects socio-economic and educational characteristics have on earnings and success in the occupational careers of the graduates. This would enlighten us on the role of education in redistribution of income among graduates, a role believed by the human capital theorists to be important.

Most of the analysis will be based on simple cross-tabulations, frequency distributions and chi-square statistics to analyse the degree of association among different characteristics. For the earnings functions, one would carry out regression analysis. Once the list of hypotheses has been determined based on the checklist of questions mentioned before and the method of analysis decided upon, the necessary data for the graduates are collected with the help of a mail-questionnaire distributed among a representative sample of employed graduates from the graduate population. The details of the sampling technique and the organisation of the survey are given in Chapter 6.

The employability of the graduates depends also on the relationship between the employers and the institutions of higher education, the recruitment and promotion system practised by the employers. The degree of importance of the different methods of recruitment can be determined by surveying a sample of employers giving them a scale of reference for each method. The mechanisms which could improve upon the interaction between the employers and the institutions could be identified with the help of a checklist of such mechanisms and asking the employers the score for each mechanism. The difference in the recruitment and selection criteria for different types of labour market namely, public, private, etc. could be analysed with cross-tabulations and chi-square statistics. For different types of labour market, mechanisms of interaction may be different. This can also be identified by the scores that each type of labour market assigns to the different mechanisms. The average score with the standard deviation might give us the preferred mechanism for each type of labour market.

The difference in wage structure of the different types of employers influences the choice of a job by the graduates. An analysis of the minimum starting salary of the different types of employers and the criteria for fixing the minimum salary provides useful information for analysing the relationship between salaries offered and the level and type of education, as practised by the employers of different types. This analysis is again done by simple cross-tabulations and chi-square statistics, the computation of average and standard deviations. Finally, an analysis of the concordance of the perception of the employers and the graduates in respect of the characteristics of a job is performed to identify areas where degree of mismatch is excessive. Thus, the importance of better interaction among the employers and the employees can be recognized with empirical evidence and methods of corrective action could be devised. This analysis is done by assigning scores to each of a set of identified characteristics according to the degree of importance it bears to make the job satisfactory. Simple measures of association are used as statistics for this analysis. The data on the employers are collected in the same way as on the students and the graduates.

From this cross-sectional analysis one can identify the existing degree of mismatch between the system of higher education and the world of work to provide the analyst with measures for corrective action. When such analysis is conducted periodically the impact of such studies in correcting the situation can be estimated. The effectiveness of the instruments for analysis can also be determined and new instruments could be devised. The most important use of such follow-up studies is that it gives information on the changing nature of the relationship between higher education and employment over time. If the students, graduates and employers in the surveys are identified by some means to represent the respective populations, then the follow-up studies will allow for checking the expectations and achievements for these categories of the population. One could then also examine which individual characteristics influence success in the occupational career and what relationship this success has on the educational performance. This analysis will also provide information on the changes in attitudes and expectations over time and help in identifying the reasons for such changes. In summary if the students, graduates and employers can be sampled in a way to represent properly the population, simple indicators and statistical analyses as designed above could furnish the decision-makers of higher education and those in the employment market with useful guidance for reducing the mismatch between the higher education system and the labour market.

The data needs for the above analysis and their sources are given in Table 1.1. It can be observed that the list of data needs is divided into five sets. The first, relating to the socio-economic framework of the country, are needed to analyse the problems (a) through (d) and (h) through (l) above. The second set of data needs relate to the development of the education system and these data are needed to diagnose the existing education system and to analyse the problems (e) through (g), (m) and (n). These two sets of data are normally available in already published forms. The remaining sets of data mostly relate to attitudes and opinions of the students, graduates and employers in that order. Sometimes, objective information is also asked of them. These sets of data are collected through questionnaires, as given in the *Appendix A*. It will be observed from the questionnaires that in view of the research framework, each questionnaire starts with a set of questions on personal or individual characteristics of the population sampled, followed by a set of questions relating to the economic and educational status for the student and graduate population. Finally, the questions are directed to test a set of hypotheses. For example, to analyse the reasons for pursuit of higher education [problem (n)] a list of reasons was first identified by a literature search, discussions with students and graduates, and reviewing related information. Four such reasons were observed on a preliminary account to be common. Each of these reasons was listed and the students were asked to score, on a three-point scale, their degree of importance for each of these reasons. If other factors not listed were also responsible for the pursuit of higher education, they were asked to list them as well. So, an open item was left to rectify any error in identifying the reasons. The question therefore offered scope for multiple responses. The average score of each of the reasons for pursuit of higher education compared with the standard error will supply the importance of each factor. The analysis will further suggest if a particular reason is statistically 'not important'. Here, there were four hypotheses with four identified reasons. In each case, the null hypothesis was that the reason was not important. On a three-point scale, where 2 indicated 'very important', 1 indicated 'important', and 0 indicated 'not important', the null hypothesis would be to set the average score in the population to zero and test if the average score achieved by that reason from the sampled students is significantly different from zero. This can be done by applying the 't' statistic. In addition, from the simple cross-tabulations, an idea can be formed whether any particular reason was more important for a particular group of students. This could later be tested statistically with a more sophisticated statistical analysis. In several cases, the same question was repeated to the students, graduates and employers. For example, importance of the different characteristics which would make a job satisfactory to an individual were tested for all three population groups.

1.5 Principal Findings

1.5.1 THE ECONOMY AND THE EMPLOYMENT PROBLEM

The Philippines is well-endowed with mineral resources, forestry and fisheries. It has an oil potential of about 10 billion barrels according to 1977 estimates. There are also hydro and geothermal sources of energy which, properly exploited, could make the country much less dependent on the import of petrol. In the fifties the country adopted a development strategy of industrialisation through import substitution. Investment, however, was concentrated on large-scale capital-intensive types of industries. Soon the urban market for consumer goods reached a saturation point. The rural market did not expand so industrialisation had to slow down and the employment situation worsened. In the sixties, the rural sector became important. Modernization techniques were applied to agriculture, rural incomes grew and GNP per capita grew at an average rate of 5-6 per cent during 1960-65. The trend has continued in the seventies. Agricultural development has continued to be the priority objective of the country. Land reform programmes have been initiated to reduce the income disparity among the people. According to a 1975 survey, less than a third of the income recipients at the top account for nearly two-thirds of total income. The real gross national product has been increasing at an average of more than 6 per cent per year during the seventies. Agriculture, forestry and fishing contribute one-third of the total net domestic product. The production sector constitutes slightly more than a quarter of the net domestic product and the services sector accounts for the rest. Gross domestic capital formation increased at an annual rate of 17.3 per cent during the period 1973-76, which shows the country's efforts to reverse the role of agriculture and industry in the economic activities. However, the government investment expenditure per capita by region shows marked disparity: Metro Manila registering the biggest per capita regional allocation with a total allocation of 1,667 Pesos (P)[1] per capita in 1976 as compared with Southern Tagalog Region having the lowest regional allocation with only 43 P. per capita.

The balance of trade situation of the country changed from positive to negative during the period 1973-76. The reasons for this change are mainly the oil crises and unfavourable terms of foreign trade.

The population in the Philippines has been increasing at a rate of 2.7 per cent per year. The dependency ratio is 87 at the national level. Analysis of population migration patterns shows that 59 per cent of total migration is urban or suburban bound and the rest rural bound. One of the important reasons for migration to cities is availability of jobs and services.

In spite of the economic growth in the seventies it is recorded that on the average only 22 per cent of the children of age-group 0-6 have normal nutritional status. The remainder suffer from malnutrition of various degrees.

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[1] One Peso = 0.12 US $ approx.

The unemployment rate in the country was about 5.2 per cent in 1976 with a total work force of 15.5 million. However, rate of underemployment was of the order of 11 per cent. The labour force has grown at an annual rate of 4.8 per cent per year during the recent past.

The ten-year plan (1978-1987) for development of the country envisages:

(a) among other promotions, promotion of social development through reduction in income disparities, creation of employment opportunities, and improvement of the living standards of the poor;
(b) attainment of self-sufficiency in food and greater self-reliance in energy;
(c) attainment of sustained economic growth;
(d) increased development of weaker regions especially rural areas;
(e) improvement of habitat through development of human settlements and proper management of environment.

It is believed that higher education in the country has a contribution to make in implementing these programmes. However, the past level of performance of the system of higher education in meeting the needs of social and economic development needs to be examined. In the process, of course, the efficiency of the operation of the system of higher education needs to be examined.

1.5.2 THE DEVELOPMENT OF ELEMENTARY AND SECONDARY EDUCATION

The development of the Philippine Educational System is characterized by the various changes related to the political ideology and culture of the different sovereign powers which have controlled the government. Thus, the objectives of elementary and secondary education have often been re-examined and restated to conform to the national goals set by the government in power.

Before 1863, there was no known system of elementary education in the country. Primary education was given in the homes of tutors, in convents and by sisters of charity; it consisted mostly of the 3 R's and

Christian Doctrine. The Educational Decree of 1862 had enabled the organization of a system of primary education with emphasis on religion.

With the coming of the Americans, basic education was introduced. As defined by the Department of Public Information that was created by the Philippine Commission, "the primary aim of education is to prepare the individual to exercise the right of suffrage intelligently and to perform the duties of citizenship fully and honestly."

The Educational Act of 1940 made primary education compulsory and instituted some changes in the educational system as well. Among them were curriculum revisions, a six-year elementary education, and the support of elementary education by the national government.

The development of citizens of good moral character, acquisition of knowledge and skills for useful life, and love for the national language continued to be emphasized at the elementary level during the post-war period. Community schools were also developed as instruments for the improvement of community life.

On June 16, 1950, the Board of National Education was created by Republic Act 1124 as the highest policy-making body on education. Upon re-examination and re-evaluation of the Philippine educational system, the Board defined the objectives of elementary education as embodied in the Revised Elementary Education Programme as follows:

> "Elementary education shall aim to develop the spiritual and physical capabilities of the child, provide him with experience in the democratic way of life, and inculcate ideals and attitudes necessary for an enlightened, patriotic, upright and useful citizenship."

Under the New Society, new educational reforms instituted affected the elementary education curriculum. Work education programmes developed cognitive and affective skills in Grade III and IV and fundamental work skills in Grade V and VI.

Secondary education during the Spanish period was first offered by the religious orders and was made available to the offspring of affluent families. Emphasis was on academic excellence. It was during the American period that public secondary education was extended to the public. For some time, it was considered a link between elementary education and tertiary education with emphasis on general education preparatory to college work. Lately, however, secondary education has become more vocationally and technically oriented to meet the socio-economic needs of the developing country especially for middle-level skills.

As approved by the National Board of Education in 1973, the general functions of secondary education are continuation of general education as started in the elementary schools, preparation for a vocation and preparation for college work. Hence, there is a general curriculum for all types of secondary education where practical arts are recognised for all years.

There has been a rapid expansion in enrolment at both levels from 1901 up to the present. Before the war, enrolment in both levels steadily increased with the highest average annual growth rate of 10.1 per cent during the period covering school years 1901-02 to 1911-12 for the elementary level and 19.8 per cent during the period covering school years 1911-12 to 1921-22 for the secondary levels. After the war, the highest average annual growth rate was recorded for the school years 1962-63 to 1967-68 which was 5.9 per cent for elementary level and 14.7 per cent for the secondary level. However, enrolment growth from school years 1952-53 up to 1962-63 reached zero in public schools. This was possibly due to the abundance of private schools throughout the country which students chose over the public secondary schools.

The country records one of the highest literacy rates comparable even with developed countries. In 1970, 83.4 per cent of the people were literate. Sixty-three per cent of the children in the age-group 6-14 and 30 per cent of the youth in the age-group 15-20 attended school in 1970. The situation has further improved since then.

Enrolment by sex indicates more males than females in the elementary levels. Similar observations were noted with the secondary levels except in the later years, i.e. school years 1971-72 and 1974-75 where there was an almost equal ratio.

An interregional comparison on elementary school enrolment for the period 1952-53 to 1974-75 shows a general incidence for all regions with Regions IV, VI and III having the highest enrolments. For the secondary level, Regions IV, VI and I registered the highest enrolment. Regions IX, XII and II had the lowest enrolment at both levels.

The percentage of survival from Grade I to Fourth Year in both public and private schools showed an increasing trend. These were 21.96 per cent for school years 1956-57 to 1965-66; 27.93 per cent for school years 1963-64 to 1970-71 and 30.74 per cent for school years 1966-67 to 1974-75. Although the observed trend is gratifying, the ratio of the number of pupils that reached Fourth Year to the number of pupils in Grade I is still low.

There is an observed downward trend in the dropout rates all over the country from school years 1972-73 to 1974-75. From 6.22 per cent in school year 1972-73, the dropout rate declined to 5.93 per cent in 1974-75 in spite of the upward trend in enrolment in the same period. A ranking of the three regions with the lowest dropout rates shows that Regions I, III and IV consistently had the lowest rates over the period. Of the regions with the highest dropout rates, Region VII consistently ranked first among the three regions considered.

The major findings of Project *SOUTELE* (Survey of Outcomes of Elementary Education) provided an assessment of learning outcomes of elementary pupils. The survey was designed to provide decision-makers with the learning profiles of fourth and sixth graders together with information on the relationship between scholastic achievement and school and non-school factors.

Among the major findings are:

A. On Inputs of the System: Resources of Elementary Education

1. The physical resources on the opinion of principals and head teachers are "barely adequate."
2. Teachers and school administrators are generally qualified according to current standards.
3. Teachers generally possess positive attitudes towards their work, the community and their pupils.
4. While classroom teachers and school heads are convinced about the importance of educational innovations, they have some misgivings about the manner in which these are introduced and implemented.
5. Boarding school pupils, central school pupils and private school pupils differ quite sharply with regard to levels of family income, education of parents, and exposure to mass media. Taken together, these differences will probably add up to inequalities in the ability to profit from the educational system.

B. On Output of the System—Academic Achievement and Pupil Attitudes

1. There were no significant differences in the achievement test scores of Grade IV and VI pupils.
2. The subject areas in which the Grade VI pupils across the nation showed the least achievement are those which have traditionally been referred to as the three R's.
3. The pupils' attitudes towards teachers are independent of their experience in school. Pupils who like school do not necessarily like their teachers or vice versa.

   However, pupils who have definitely positive attitudes towards their teachers and their school tend to score higher on achievement tests than those who are neutral or have negative attitudes.

The highest quality of education in the Philippines is expected to be achieved by regulating and reorienting the flow of students from the secondary level to the institutions of higher learning. This is to be achieved through the National College Entrance Examination (*NCEE*), which is used as a national criterion for college admission. Since 1973, the *NCEE* has been administered yearly.

1.5.3 THE ORGANIZATIONAL STRUCTURE

In accordance with the total reorganization of the government machinery, the Ministry of Education and Culture reorganized itself to achieve efficiency and to provide better service to its clientele. The basic feature is the organization of regional offices headed by Regional Directors with staff bureaus and service groups. The reorganized system makes possible the exercise of initiative, imagination and leadership in curriculum development and innovations in addition to administrative matters that can be handled at the regional levels. It is also expected to bring about faster implementation of educational reform programmes.

The Secretary of the Ministry is assisted in the formulation of plans, programmes and projects by the Educational Development Projects Implementing Task Force (EDPITAF), four service groups (the Administrative Service, the Finance and Management Service, the Planning Service and the Information and Publication Service) and three Bureaus (the Bureau of Elementary Education, the Bureau of Secondary Education and the Bureau of Higher Education). In the implementation, the Secretary is assisted by the five offices and their staff. The administration hierarchy consists of regional directors, division and city superintendents, and school district supervisors and principals.

The school system is taking steps to review its programmes and to institute some changes in school curricula to make the learning experiences of pupils and students relevant to the needs of society. Thus it is tackling social problems like population growth, drug addiction, juvenile delinquency, malnutrition, community health, environmental pollution, destruction of the country's natural resources, and the development of national discipline.

Non-formal education programmes of out-of-school youth have been developed to progressively remove the delineation between both systems, the formal and non-formal education. Training centres have been created—for semi-skilled and even professionals—where they may update their knowledge and skills or otherwise gain new insights any time.

Human resources and training development thrusts are expressed in different government policies and activities. The need for integrated and coordinated human resources development is emphasized in order to identify which government agencies should be responsible for the development and training activities of the country. The Ministry of Education and Culture appointed an Under-Secretary for non-formal education to this effect, and also embarked upon various educational reforms and programmes in cooperation and collaboration with other agencies and organizations.

Planning theoretically exists even at the regional levels under each Planning Unit of the regional office. In addition to participating in regional development planning representing the education sector, the Planning Unit provides research results and statistical data to the national office. It also formulates operational plans and systems and procedures necessary for the implementation of programmes and projects at the regional level.

1.5.4 THE DEVELOPMENT OF HIGHER EDUCATION IN THE PRIVATE SECTOR

Higher education in the Philippines began during the Spanish era. It was utilized as a medium for evangelization. The system was then characterized by elitism, church control and cultural orientation.

With the coming of the Americans, the Philippines underwent major changes. The functions of the Church and the State were clearly delineated. The creation of the University of the Philippines in 1908 formalized the dual system of education—the public and the private. The concept was formalized by law, which defined a private school as any institution of learning managed by private individuals or corporations which offers courses of any level and confers diplomas or titles and degrees.

The developments that took place during the American era would best be described thus: Democracy replaced Christianity, pragmatism replaced scholasticism, citizen-oriented education replaced culture-oriented education, English replaced Spanish as a medium of instruction, and mass education replaced elite education.

The Americans also introduced the concept of stock and nonstock corporations through the passage of Republic Act 1459 in 1906. Stock corporations allow stockholders to derive profits from the operations and to declare dividends. Educational non-stock corporations on· the other hand should reinvest their net profits for the improvement of the institutions.

In 1969, Republic Act 6055 was passed, providing for the possible and voluntary conversion of educational stock corporations into foundations. Tax-exempt educational foundations exist in perpetuity. If dissolved, their assets go to the state.

Hence, private educational institutions consist of three types—stock, non-stock and foundations.

Control is exercised by the Board of Trustees or its equivalents, the members of which are elected or appointed by the stockholders or members, or in some cases as in sectarian institutions, by the bishop or superior of the order or congregation. They exercise the corporate ownership of the institutions by virtue of the fact that any educational institution in the private sector has to be incorporated according to law. Four main responsibilities belong to a Board of Trustees: general policies, general management, approval of new courses or discontinuance of old ones, and ceremonial functions.

At the outbreak of the war in 1941, there were 8 universities and 84 colleges in the private sector of higher education. Twenty-eight years later, there were 594 institutions of higher learning in the same sector, 36 with university status and the rest colleges. 293 were educational stock corporations, 254 were non-stock and 47 were foundations. Eight years later, in 1977, the number rose to 694.

In 25 years, i.e. 1950-51 to 1975-76, the growth of collegiate enrolment was more than fourfold. During the first decade, annual enrolment growth rate was 3.6 per cent but went up to 8.14 per cent in the following decade. However, the rate of expansion went down to 1.69 per cent for the period 1970 to 1976. The enrolment share of the private sector to total collegiate enrolment declined in school years 1964-70 to 1975-76. Females outnumbered males which could partly be traced to the type of collegiate courses being offered. One half of the college students were studying in Metro Manila as of 1972 while the other half were thinly distributed over the other regions. By social groups, a 1975 survey showed that 27.3 per cent belong to the upper class, 70.7 per cent to the middle class and 1.9 per cent to the lower class. The basis of classification considered three variables of parents: income, education and occupation.

The growth of collegiate enrolment varies according to courses. For the seven-year period, school year 1966-67 to school year 1972-73, Commerce grew the fastest with 9.3 per cent annual growth and Law grew the slowest with 2.6 per cent. Teacher Training courses suffered significant decreases averaging 15.9 per cent annually.

Data on the number of high school graduates and the number of first year college students for a ten-year period 1962-63 to 1972-73 reflect an erratic flow. However, the average flow was estimated to be around 83 per cent.

Rough calculations based on available data from school years 1962-63 to school years 1972-73 reveal that Engineering and Teacher Training courses had the lowest survival rates with 29.5 and 36.4 per cent respectively while Commerce, Medical Science, Music and Fine Arts and Food, Nutrition and Dietetics had the highest survival rates. Teacher Training registered the highest dropout rate of 21.2 per cent, while Liberal Arts and Sciences, along with Engineering, Law and Agriculture, had dropout rates of over 17 per cent annually.

The most recent study conducted by Mangahas and Quezon estimated that the economy would need about 234.4 thousand college graduates by the year 2000. The authors presented rough approximation by field of study.

As of school year 1972-73, there were a total of 19,806 faculty members teaching in the private sector representing 89.2 per cent of the total. More than one half (55.8%) of them were teaching full time. The distribution of teachers is observed to be in variance with the distribution of college enrolment. According to highest educational attainment, 24.6 per cent have a master's degree or higher, 66.8 per cent possess a bachelor's degree and 5.5 per cent have less than a bachelor's degree. Faculty-student ratio was 1:18 in school year 1963-64, 1:26 in school year 1966-67 and 1:22 in school year 1969-70.

As a rough indicator of the availability of library resources, the ratio in the private sector was about 6 books for every 100 students in school years 1972-73. The ratio varied according to field of study with Liberal Arts and Sciences having the highest ratio with 41 books for every hundred students and Agriculture having the lowest with less than a book for every hundred students.

As of school year 1973-74, a total of 26,312 classrooms were utilized for lectures in college courses although not all of these were solely for college use. About 5,637 laboratory rooms were used solely by college students.

Operating cost per student differs by type of institutions, by course offered and by geographical location of the school. In 1972-73, the median cost per student was found to be around P. 375 while the average was P. 680. By school type, hospital schools along with seminaries had the highest per student cost with averages of P. 1,794 and P. 1,628 respectively. Teacher training schools and business schools had the lowest cost with P. 594 and P. 509 respectively. In 1969, prior to the increase of student and other fees. Western Visayas had the highest average operating cost per student (P. 269) and Briol registered the lowest (P. 87.00).

In 1970-71, in a survey conducted by the Bureau of Private Schools, the average current operating expenditure per student per year was P. 302. Of this, 41.4 per cent was for salaries and 14.3 per cent for administration.

All in all, 78.9 per cent was devoted to recurrent expenditure while the rest was used for capital expenditures.

In 1970-71, students paid on the average about P. 240 a semester for 4-year college courses. Actual figures varied according to major fields of study and the type of school offering the course. In general, sectarian schools charged higher student fees than non-sectarian schools. They also varied according to region. It is estimated that because student fees were allowed in 1972 to increase by 15 per cent annually, a college student pays on the average P. 766.24 per year.

The social rates of return of four years and five years of college were found to be around 8.5 and 8.0 per cent respectively. It was also found that only mechanical engineering and chemical engineering give rates of return higher than the average; in some other fields, only some institutions yield rates of return higher than the average while some fields, irrespective of the student's college, give less than 5 per cent or, in some cases, even negative returns.

Student fees constitute the main source of income of private higher education institutions. In school year 1972-73, the dependence of these schools on student fees reached on the average 92 per cent. By type of control, non-sectarian schools appear to be more dependent on student fees than their sectarian counterparts. According to regions, private schools in Cagayan Valley and Central Luzon registered the highest dependency rate on student fees at 98 per cent. The lowest was recorded in Northern Mindanao with 70 per cent.

The financial resources of private collegiate schools are applied mostly to salary expenditures and operating expenses: 70 per cent of the total in school year 1972-73. Expenses for institutional development or expansion like capital outlay received a meagre share of only 7 per cent of the total. Expenditures however varied according to geographical locations. The percentage share of salaries was observed to be high in Eastern Visayas (69%) and in Cagayan Valley (61%), regions often regarded as the most educationally depressed areas in the country.

Historically, private schools have larger financial allocations for recurrent expenditures, though the percentage share seems to be decreasing.

The enrolment explosion experienced during the decade of the Sixties was a reaction to liberal educational policies adopted by the government in bringing education, particularly elementary education, to the greatest number of individuals. Together with other social factors, this policy raised the educational expectation of individuals across all social groups, thus creating a high demand for secondary and collegiate education. The task of meeting the demand for secondary education was equally shared by the government and the private sector. However, at the collegiate level, the demand was largely met by the private sector, with government participation limited only to a few state colleges and universities. As a response to the market, investors in education opted to establish schools which offered the least costly courses such as commerce and liberal arts. Large numbers of private schools also grew all over the country, particularly in urban centres.

Past expansion was brought about mainly by deliberate effort to meet social demand for education. Manpower demand was only incidental. However, because of this approach, a disparity in the supply of and the demand for such graduates in the Philippine labour market was felt not only in numerical terms but also in the kind and quality of education demanded by the users. In effect, some forms of dysfunctionality become discernible between the private higher education sector on the one hand, and the economy on the other.

1.5.5 THE DEVELOPMENT OF THE STATE HIGHER EDUCATION

State higher education came with the Americans. It was ulilized to bring about a thorough socio-cultural, economic and political reorientation of a society influenced by the long rule of the Spaniards. Public higher education institutions were established to meet the demand for teachers needed in the implementation of basic education programmes. With the creation of the Department of Public Instruction by the Philippine Commission on April 7, 1900, the Philippine Normal School and the Philippine School for Arts and Trade were also established to supply the needed elementary and industrial arts teachers for the public school system. In 1904, the Manila Business School (now Polytechnic University of the Philippines) was established to train Filipinos in the affairs of the government.

As the foothold of the Americans over the islands stabilized, other regional schools were organized. At the time of independence in 1946, there was one state university, one agricultural school, eight regional teacher-training institutions aside from the Philippine Normal School, one trade school and one business school. Since then, the system has expanded into eight universities, thirty-four chartered state colleges and forty-eight non-chartered higher education institutions.

State colleges and universities are governed by a charter enacted through legislation. It guarantees a vast degree of autonomy in terms of curricular and academic standards, appointment and compensation of faculty and the determination of priorities for the institutions. Due to the nature of the charter, these institutions operate independently of the Ministry of Education and Culture. The Board of Regents, the highest policy-making body of these institutions, has the Minister of Education and Culture as ex-officio chairman.

Non-chartered institutions operate as an integral part of the Ministry of Education and Culture and are at present under the control and supervision of the Regional Directors. The autonomy characterized by chartered institutions is lacking. These schools usually carry out programmes in teacher training, vocational arts and trades and agriculture.

The percentage share of public higher education enrolment in total higher education enrolment had been increasing from 10.97 per cent in school year 1971-72 to 15.57 per cent in SY 1975-76. By sex, females predominate especially at the graduate level. This is, however, explained by the fact that in teacher training which accounted for about 20 per cent of total enrolment, females outnumbered males by about 9 to 1. The geographical distribution shows a concentration of enrolment in Region IV-A because of the presence of the larger state schools in this area which altogether accounted for about two-thirds of total public higher education enrolment in SY 1972-73.

The development of fields of study in the public higher education system has been a result of the intimate link of the system to the planning process which determines and defines manpower for national development, and a diminished demand for certain types of educational programmes that the private sector is incapable of sustaining since they are constrained to develop in that direction.

As of SY 1973-1974, the total teacher staff was 5,390 broken into 3,865 for state colleges and universities and 1,525 for non-chartered higher education institutions. The University of the Philippines (UP) teaching staff constitutes 36.2 per cent of the total, with 29.4 per cent of them having doctorate degrees and 25 per cent with masters degree.

Except for three state universities and one state college, the available funds for capital expenditure for state colleges is only 9 per cent of the total operating budget. Most of the physical plants have been converted from big high schools and colleges transformed into universities and hence are largely deficient for the upgraded academic roles which they have assumed. On the average, the majority of these physical plants are more than 15 years old.

In the study conducted by the Presidential Committee to study state higher education in 1975, it was found that (a) the University of the Philippines incurred the highest cost per student at P 4,000 to P 5,700 depending on the course of study; (b) not a single state school approximates that of UP's per capita cost; (c) only 3 schools are able to spend even half of this cost; and that (d) the remaining state schools' per student cost is less than a quarter that of UP.

Of the total income of chartered institutions 84 per cent comes from national budgetary allocations, 14 per cent comes from tuition fees collected and another 2 per cent comes from the schools' commercial operations. For non-chartered institutions, income comes from the national allocation to the MEC[1] which was about 2.62 per cent of the total MEC budget in 1977. Tuition fees collected are reverted to the national government for reallocation in the succeeding fiscal year.

The expansion of the state system of higher education was conditioned by several factors:

(a) the need to assure access to some sub-groups of the population who cannot afford private education;
(b) meet the needs for types of manpower deemed vital for national development;
(c) its new-found role of providing academic expertise and community leadership through various extension programmes in its environ;
(d) partisan policies which regard the establishment of such institutions in their constituency a political monument of achievement, and
(e) pressures from the institutions to elevate their institutional status which in operational terms meant a corresponding increase in faculty status and compensation, expanded operations with the corresponding increase in budgetary support.

However, steps are being taken regarding those problems of declining academic standards and available resources.

1.5.6 THE SYSTEM OF HIGHER EDUCATION AS PERCEIVED BY THE STUDENTS, GRADUATES AND EMPLOYERS (results of the *HELMS* survey)

Six regions out of 13 accommodate 75 per cent of the student population in the institutions of higher education in the Philippines. Metro Manila, i.e. Region IV, enrolled some two-thirds of the students surveyed representing more or less the national situation.

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[1] MEC : Ministry of Education and Culture.

There are more female students than male students in the Philippines higher education system. Almost half of the students (45%) have Tagolog as their dialect. Approximately one out of three students follows commerce and business administration as their field of study, the next popular field is engineering and technology with 17.8 per cent of the student population followed by medicine which is chosen by 13.8 per cent of the students. It was also observed that there is a high rate of migration for pursuit of higher education. All the other seven regions sent their secondary school leavers to the abovementioned six regions for higher education.

The screening for higher education starts after a student leaves primary school. Very few of the students who attend Barrio highschools and science or vocational high schools (10%) go for higher education. Ninety per cent of the university students come from general secondary schools.

Metro Manila (Region IV) has the largest proportion of student enrolment (34%) followed by Ilocos region (Region I, 13.5%) and Southern Togalog (Region XIII, 12.4%).

For one out of five students the father's occupation is agriculture, for 14 per cent of the students the father's occupation is professional or technical work. Administration, executive or managerial occupations, production and transport and sales occupations account for roughly 12 per cent each.

In respect of the sector of father's employment, agriculture and community services represent nearly half the student population. Trade was the parents' employment sector for more than one-tenth of the students. In respect of parents' income, more than 60 per cent of students came from families with income less than P. 2,000 per month. The average monthly family income was P. 1945.98 per month which is nearly seven times the monthly nationwide per capita income. This shows that only those families which are above the average in terms of income send their children to pursue higher education. It was observed that the higher the test score in the NCEE, the greater is the probability of succeeding in college.

The initial analysis of correlation between general scholastic aptitude measured in the NCEE and the grade point average measured at the college during the first semester does not always show positive correlation because, it is believed, of variations in the grading system at different institutions, adjustment problems of students in the first semester and the problem of the measurement of the validity of the test. Several improvements are being made in the college entrance tests.

About 98 per cent of the secondary school leavers aspire to higher education and sit for the NCEE. In 1975, 47 per cent of the applicants were males. The average scholastic aptitude was about the same for both male and female students. There are marginal differences in the mean scores, with the younger age-groups performing better. Performance was better for students coming from higher socio-economic backgrounds (slightly over one-third of the applicants had a monthly family income of less than P. 250). The higher the educational level of parents, the better was the performance of the students. The performance of the applicants in the NCEE was related to the prestige value of the field of specialisation they intended to pursue. For example, students aspiring to engineering fields score in the 70 and above percentile brackets, those who aspire to agriculture and fishery activities obtain percentile ranks of 50 and below. Parental influence on the choice of a student's field of study was less for those who performed better in the NCEE. Those who scored very high percentile ranks indicated that they could not depend on their families for financing their higher education.

Good employment opportunity is the most important reason for the secondary school leavers to pursue higher education according to the graduates surveyed. Next in order of importance is the possibility of a wide choice of future careers. Factors like social prestige, family influences, following the peer group do not have any significant influence on a school leaver's decision to pursue higher education. Once they have decided to pursue higher education and have been admitted to an institution, one out of three students would not be able to pursue the course chosen because of lack of financing or because parents would like them to do something else.

In the Philippines, career guidance facilities were very limited for school-leavers in the past, although the situation is now improving. Organized placement facilities for graduates are also rare.

In the Philippines the most frequently used method of recruitment was personal contacts. What is more interesting is that the employers find this the most effective method of recruitment as well. The most important difficulty in recruiting graduates, as perceived by the employers, is the lack of properly qualified persons to meet the needs of the job although it has been mentioned by the graduates that their training meets the needs of the job. This is evidence of mismatch between the perceptions of the graduates and the employers in respect of the needs of the job. In-service training is provided by two out of three employing units surveyed, and almost half of the firms provide pre-employment training. Although personal contacts play the most important role in the method of recruitment of graduates, 'work experience' and 'academic performance' are considered to be the most important criteria for selecting a graduate for a job.

After graduates have completed their studies the employment market was more flexible for some of the fields of studies than others. Commerce and business administration graduates could have a job in any of the standard occupational classes (as defined by *ILO* and adopted by the country). In substantial numbers teacher education graduates also have moved to occupations other than teaching. Some engineering graduates have taken up administration and managerial positions which would normally be occupied by commerce graduates. Graduates of liberal arts, social science and humanities have, however, a less flexible employment market. The graduates of the University of the Philippines show a distinct characteristic of being able to fit into the top two major occupations, namely: professional and technical, and administration and managerial positions. Graduates of Protestant sectarian colleges and state art and trade schools follow them in occupying the highest positions in the employment market. The proportion of graduates occupying high positions is best for the proprietary schools and the Catholic schools. The state higher education system supplies relatively larger numbers of graduates to high level positions than the private higher education system. The average waiting period for a graduate to get a job after finishing the course of studies is about six months. Nearly 80 per cent of the employed graduates got their jobs within a year after finishing. Only 4 per cent waited more than two years to get the first job. Graduates of the University of the Philippines waited the shortest period of time to get a job, whereas those of the proprietary and other private schools had to wait the longest. It was observed that lack of job opportunities was the major factor for the delay in getting jobs for the graduates of teacher training institutions, agricultural colleges and arts and trade schools.

Almost all of the graduates surveyed found their training content and method both relevant and necessary for their jobs. According to them, formal education could not be replaced by non-formal education, but could be supplemented for better performance on the job. Work related experiences integrated with the formal education system appear to be the most preferred structure of education.

According to the employed graduates, the most important factor to make a job satisfactory is the proper use of their skills. Income ranked sixth on an eight-point scale. Poor career prospects are cited most frequently as the reason for job dissatisfaction. Low salary was cited as a reason for discontent with the job by only eight per cent of the graduates. Agriculture, sales and armed forces workers were the least satisfied, perhaps because of lack of required skills imparted by the system of higher education.

In respect of salaries of graduates, those of the UP system earn on average the highest salaries. Those of agricultural colleges earn the least on the average. Graduates working in the financing, insurance and real estate organizations earn the highest salaries and those working in agriculture, fisheries and forestry earn the least. In deciding on the starting salary, work experience and field of specialization of the graduates play the most important role.

Socio-economic status variables of graduates, type of firms and regions from which students came did not have any influence on their earnings differentials, whereas occupational classification, industrial classification, type of university and educational attainments of graduates had influenced their earnings.

In respect of mobility on the job, there are fewer instances of upward mobility within the same professional scale than within the same occupation. However, the lower the level of occupation, the higher the average growth in income among the graduates.

1.5.7 EDUCATIONAL PLANNING AND MANPOWER PLANNING IN THE PHILIPPINES

In the Philippines, manpower plans in the past have not been well matched with educational plans. The problem is lack of proper statistics and forecasts of supply from the institutions of education and also absence of necessary data about the labour market.

According to the estimates of supply of college graduates during the period 1978-82, prepared by the National Manpower and Youth

Council, it is observed that more than half of the graduates will come out with a degree in commerce and business administration, one-tenth in engineering and technology, one-eighth in arts and sciences, one-twentieth each in agriculture and medical sciences, one-twenty-fifth in teacher training, and the remainder will be in chemistry, nutritional studies, law, music and fine arts, natural sciences and other post-graduate studies. This output is estimated to result in unemployment of about 70,000 college graduates in 1978 and about 95,000 in 1982, if the economy continues to grow at the same rate as in the past and recruitment criteria of the employers remain unchanged. The situation is alarming and is bound to result in educational inflation in the labour market, which would mean under-utilization of the training offered to students. Most of this unemployment and underemployment could occur in the field of commerce and business administration. It is unfortunate that estimates of needs for skills in the economy are not based upon fields of studies which would enable us to find the extent of foreseeable unemployment in other fields and the flow from higher education to jobs.

Table 1.1 *List of variables and types of information and statistics collected.*

Variables	*Required information statistics*	*Sources*
1. Socio–economic framework of the country		
(i) Economic potential of different regions.	(1) Estimates of reserves of natural resources.	(1) Geological surveys, economic surveys: government and non–government agencies.
	(2) Physical characteristics of the regions.	(2) Geographical surveys: government and non–government agencies.
	(3) History of the economic and social development of the country.	(3) Historical studies in the country: government and non–government agencies and individual authors.
(ii) Economic sectors, their growth and degree of balance with the resource potential, bottlenecks for development. The rôle of the rural sector in national development.	(1) The economic structure of the modern sector: the industrial origin of gross domestic product, level of saving, wage employment, the rôle of the subsistence sector, income per capita.	(1) Economic surveys, reports from national government agencies, international agencies and private agencies, and national economic and social development plans.
	(2) Their relevance with the natural resource potential: degree of exploitation of the natural resources and in-country processing: implications or types of skills needed.	(2) Same as above and manpower reports if available, and other studies on relating skills with techniques needed for exploitation and development of natural resources including agricultural resources.
(iii) Population characteristics by regions, social groups and sex.	(1) Regional distribution of population by social groups, sex and age.	(1) Census, sample surveys.
	(2) Growth of population: implications for educational policy.	(2) Same as above, and studies relating education with population.
	(3) Allocation of capital expenditure per head, by region.	(3) Economic surveys and government reports, estimates of public expenditure of the government.

Table 1.1 (contd.)

Variables	*Required information statistics*	*Sources*
	(4) Formal employment as percentage of total population. (5) Attitudes and value systems of the people of different regions.	(4) Census, sample surveys. (5) Historical and social studies on the country, government and non–government.
2. Educational system		
(i) Past development of education in general and higher education in particular, its rationale and inconsistencies if any in the pattern of development as related to the social-economic framework of the country.	(1) Statistics on enrolments by types and level of education—for the past and present—with special reference to higher education. (2) Enrolment by sex and region. (3) Growth of enrolment particularly for higher level of education. (4) Growth of physical facilities and other facilities, namely teachers, budget, etc. (5) Estimates of flow rates by grade, sex and level of education.	(1)–(5) Ministry of Education statistics, individual educational institutions, educational research units.
(ii) Existing organizational structure; its problems, if any, in respect of meeting the objectives.	(1) The facilites for education available at present in the formal system particularly for the higher level of education. (2) Linkage between the higher education system and the second-level education system. (3) Rôle of private and public sector agencies in the control of education in general and higher education in particular, in respect of budgeting, financing, curriculum development, etc.	(1)–(3) Same as above.

Table 1.1 (contd.)

Variables	*Required information statistics*	*Sources*
(iii) Quantitative development of higher education as related to the socio-economic framework of the country and the national policy guidelines.	(1) Stock of enrolment by type of higher education, by institution, sex and region of home.	(1)–(7) Same as above.
	(2) The existing admission policy for different types of higher education.	
	(3) Stock of graduates by specialization, institution, and sex.	
	(4) Past trend of growth in enrolment and necessary facilities.	
	(5) Cost per student by type of higher education.	
	(6) The capacity of the institution to expand or control.	
	(7) Number of students abroad for training by type and duration of training.	
	(8) Alternative estimates of graduates to meet the needs of the economy at least quantitatively.	(8) National Policy guidelines, estimates of manpower needs, information on the institutions' capacity to expand and/or control estimated internal efficiency of the higher education system.
(iv) Characteristics of the labour force: employment situation.	(1) Labour force in the formal sector by sex, region; occupation level and income—participation rates by sex and age.	(1) Economic report, census, sample surveys: government and non–government.
	(2) Same information by different industries of the modern sector.	(2) Same as in (1).
	(3) Estimates of labour force in the informal sector and their earnings.	(3) Census, sample surveys of the rural sector—if any.

Table 1.1 (contd.)

variables	*Required information statistics*	*Sources*
	(4) Estimates of productivity by sector.	(4) Economic survey, census of manufacturing industries conducted by central statistics agency or by any other agency.
	(5) Unemployment in the formal and informal sector.	(5) Employment exchange offices, sample surveys of employed graduates or waiting period of the graduates for getting a job, census figures, manpower surveys from Ministry offices, central statistical office or any other source.
	(6) Shortage of national skills in the modern sector.	(6) Same as above and also a survey of the employers.
	(7) Role of expatriates in the national development.	(7) Census, statistics on localization programmes of different agencies.
(v) Types of skill needed for the development of the economy.	(1) Stock of qualified manpower by nationality, educational level, occupation and sector serving.	(1) Manpower report, census statistics, survey of employers.
	(2) National policy guidelines in respect of localization, economic growth and other attitudinal changes (national service scheme, etc.) of the people and social aspects of the country.	(2) National Plans.
	(3) Alternative estimates of needs for highly qualified manpower by educational level, occupation and sector to be served.	(3) Manpower reports, survey of employers with alternative assumptions based on the economic uncertainty in the future.

Table 1.1 (continued)

Variables	*Required information statistics*	*Sources*
3. Attitudes and expectations of students in respect of higher education[1]		
(i) Students' socio-economic background.	Sex, age, marital status, nationality, region of home, guardian's occupation, industry and income.	Student survey, see for example: Questions Nos. 1 to 7, 19, 23, 24.
(ii) Educational status.	Secondary school attended, type of certificate, year of graduation, desired education career, year of study, reasons for undertaking higher education, reasons for change in the field of study—if any, sources of finance, adequacy of the secondary education, choice of present faculty, degree of satisfaction with present educational career.	Questions Nos. 8 to 18, 21, 27, 28.
(iii) Expectations about higher education and employment.	Present employment, if any; estimated earnings if not in educational institution at present, reasons for continuing in the field of study if intending to be employed in a field other than the present field of study, dependence of the choice of career on success in present studies, expected employment sector, conditions for accepting a job in rural areas, importance of factors in the choice of an employment, expected annual earnings at different levels of working life.	Questions Nos. 19, 20, 22, 27, 33, 35 to39.

[1] All sources for item 3 are student survey.

Table 1.1 (continued)

Variables	*Required information statistics*	*Sources*
(iv) Rôle of career guidance in higher education.	Sources of information, their adequacy.	Questions Nos. 25 and 26.
(v) Rôle of employment guidance.	Desirability of the involvement of educational institutions in providing such guidance, their operational mechanism, means of getting better knowledge about jobs.	Questions Nos. 29 to 31.
4. Attitudes and expectations of graduates[1]		
(i) Socio-economic background.	Age, sex, marital status, region of home, present home, education and industry of father.	Graduate survey, see for example: Questions Nos. 4 to 14
(ii) Educational background and expectations about the education system.	Reasons for pursuing higher education, reasons for change in field of study, if any; sources of finance for higher education, diplomas obtained, specialization and present occupation, degree of relevance of educational background with the job.	Questions Nos. 15 to 22, 33 to 36
(iii) Employment status.	Methods of obtaining first employment, waiting period to get first employment, nature of present employment, changes in jobs, if any, reasons for change, importance of different factors to make a job satisfactory, income in first employment and, present income.	Questions Nos. 23 to 32, 37 to 39.

[1] All sources for item 4 are graduate survey.

Table 1.1 (continued)

Variables	*Required information statistics*	*Sources*
5. Attitudes and expectations of employers[1]		
(i) Background.	Date of establishment, type of control, size, the industry group.	Employers survey, see for example: Questions Nos. 1 to 4.
(ii) Employment characteristics.	Methods of recruitment, criteria for selection, desirability of and difficulties in having job description mechanism. Number of grduates employed by nationality, professional level, forecast of needs of graduates in the near future.	Questions Nos. 5 to 9.
(iii) Relation between the higher education sector and the labour market.	Degree of correlation between academic performance and job performance, organizational mechanism of in–service training—if any, provision for accepting students on 'sandwich' courses, methods of cooperation with the higher education institutes in the formulation and implementation of their programmes.	Questions Nos. 10 to 17.

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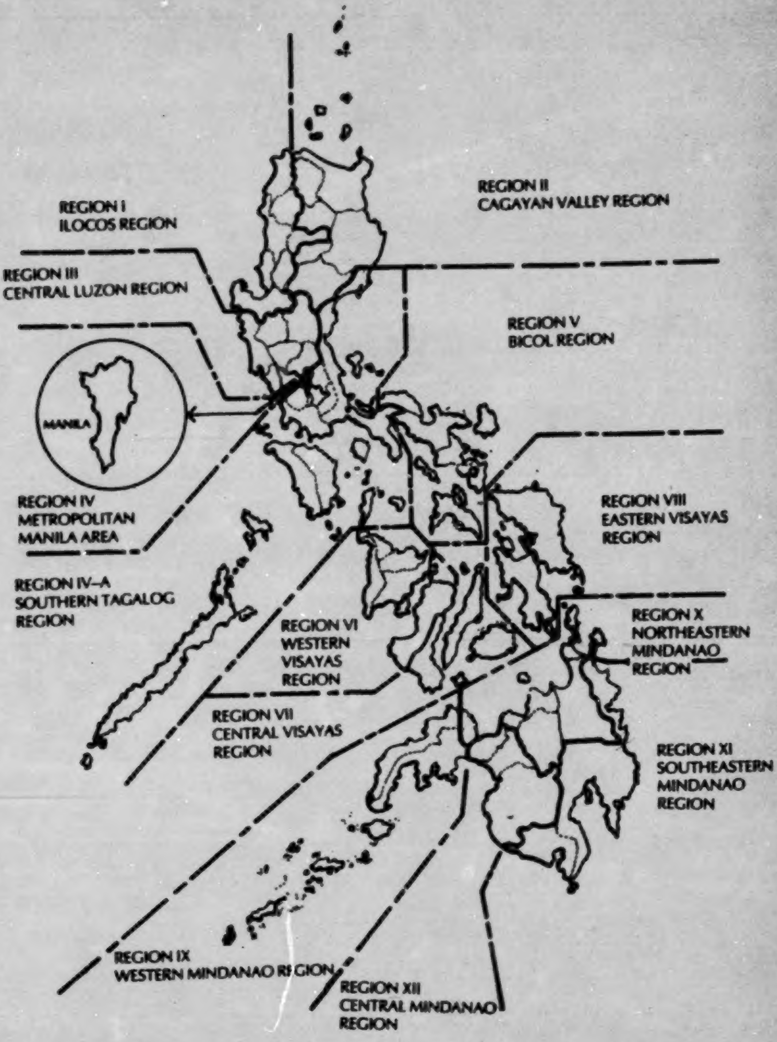
1. All sources for item 5 are employers survey.

MAP OF THE PHILIPPINES
REGIONAL DELINEATION


REGION I
ILOCOS REGION
REGION II
CAGAYAN VALLEY REGION
REGION III
CENTRAL LUZON REGION
REGION V
BICOL REGION
MANILA
REGION IV
METROPOLITAN
MANILA AREA
REGION VIII
EASTERN VISAYAS
REGION
REGION IV–A
SOUTHERN TAGALOG
REGION
REGION VI
WESTERN
VISAYAS
REGION
REGION X
NORTHEASTERN
MINDANAO
REGION
REGION VII
CENTRAL VISAYAS
REGION
REGION XI
SOUTHEASTERN
MINDANAO
REGION
REGION IX
WESTERN MINDANAO REGION
REGION XII
CENTRAL MINDANAO
REGION

Chapter 2

Socio-Economic Framework of the Country[1]

2.1 Socio-Political History of the Country

The Republic of the Philippines is situated in the Western Pacific ocean off the Southeast coast of Asia consisting of almost 7,100 islands scattered over 1,295 million square kilometers of oceanic water with a land area of 300 thousand square kilometers. It is divided into three major areas namely, Luzon, Visayas and Mindanao. Presently, it has twelve administrative regions with Metro Manila located as a separate area (see map), it is bounded on the west and north by the China Sea, on the east by the Pacific ocean and on the south by the Celebes Sea and the coastal waters of Borneo.

Although there are authentic Chinese accounts of trading expeditions to the Philippines (named after Philip II of Spain) as early as the tenth century, the archipelago first became known to the Western world on March 16, 1521 through Ferdinand Magellan, the Portugese navigator. Several Spanish expeditions to the archipelago took place during the period 1521-1564 but the one led by Miguel Lopez de Legazpi led to permanent settlement by him in Cebu in 1565. It was Legazpi who made Manila his administration centre in 1571 (the city of Manila was formally established in 1572) and he became the first Spanish Governor General in the Philippines. By 1600, the Spanish colonized almost the whole of the Philippines of today except the

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1. This chapter was contributed by Dr. Manuel S. Alba, while he was head of the National Economic Development Authority.

Muslim controlled islands of Mindanao, the Sulu archipelago and Palawan.

The Muslims resisted Spanish control until 1850 when Governor Antonio de Urbiztondo y Eguia destroyed the last resistance towards colonialization and captured the town of Jolo. Movement for freedom among the Filipinos started early in the second half of the nineteenth century and took a concrete shape in the revolt in 1874 against the Spanish rulers which was suppressed very quickly. The "Liga Filipina" was established around 1892 by Jose Rizaly Mercado as a nationalist reformist societywith the objectiveof decolonizing the Philippines. His execution on December 30, 1896 spread the freedom movement all over the country. By 1898 with the outbreak of war between Spain and the United States, the Filipinos proclaimed a provisional republic on June 12, 1898 with Gen. Emilio Aguinaldo as their President. A revolutionary assembly met on September 15, and on September 29 ratified the Filipino independence. Spain ceded the Philippines to the United States by the Treaty of Paris on December 10, 1898. On January 23, 1899, the Malolos (the provisional capital) Constitution was proclaimed; the Philippines was declared a Republic. However, conflict started between the Americans and the Filipinos. On February 6, the United States Senate, having ratified a treaty with Spain, sent reinforcements to the Philippines. Fighting continued until 1902 when the United States took control of the country; nevertheless the Filipinos continued their fight sporadically. The Philippines was to be governed by the United States with a Governor General from 1906 until 1935 when the Philippine Commonwealth was established leading to independence in 1946. Quezon was elected the first President of the Commonwealth in September 1935. During his second term as President, Japan invaded and occupied the Philippines on December 8, 1941.

The Commonwealth Cabinet formed a government-in-exile in Washington. The Philippines was liberated from the Japanese in July 1945. Manuel Roxas y Acuña was elected President of the Commonwealth in the general election of 1946. Within a few months he became the first President of the Republic of the Philippines on July 4, 1946—the day the Philippines became a sovereign independent state. Since 1946 the Philippines has had six Presidents: Manuel Roxas (1946-48), Elpidio Quirino (1948-53), Ramon Magsaysay (1953-57), Carlos P. Garcia (1957-61), Diosdado Macapagal (1961-65) and Ferdinand Marcos (1965 to the present).

The Philippines has been an ally of the United States since independence. Presently, however, the country has extended its friendship towards other countries as well, irrespective of their political philosophy.

2.2 The Economic System

The Philippine economic system as is described in the Five-Year Philippine Development Plan (1978-82) is basically founded on private enterprise. Private initiative is recognized as the engine of national progress and the dynamic component of development. Hence, the private sector is expected to provide the ancillary industries that will complement the government-owned or assisted industries.

On the other hand, the government sector is expected to undertake and support critical large-scale capital-intensive and pioneering industries. The government is likewise committed to become involved in projects with high security risks and those which are of vital interest to the nation. These may be in the areas of energy, power-generation, steel, copper-smelting and ship building. On the whole, the private and public sectors are expected to cooperate and reinforce each other in working for the desired developmental goals and in meeting the country's commitments to other regional and international organizations.

2.2.1 ADMINISTRATIVE ORGANIZATION

Government administration and operations are in the process of being physically decentralized. Local government administration is being enhanced through the reconstitution of the barangays[1] and the creation of Regional Development Councils (*RDCs*). Barangays have been organized to provide a means for citizen participation in all aspects affecting community welfare, while *RDCs* initiate the planning and coordination. This strengthens the regional and sub-regional planning capabilities and leads to a wider and more solid framework for development. On the whole, regional governments are expected to remain subject to national authority. Their operations complement rather than supplement local government.

1. Barangay : local government at village level.

2.2.2 PROVISION OF SOCIAL SERVICES

Within the framework of the Constitution, it is recognized that the State is expected to establish and maintain adequate social services in the fields of education, health, housing, employment, welfare and social security. In education particularly, it is explicitly stated that free elementary education will be provided for and, if finances permit, free public education up to secondary level is included. It is also envisioned that the State will protect labour and promote employment and equal access to work opportunities.

2.2.3 ECONOMIC POTENTIAL OF THE COUNTRY: ESTIMATES OF RESERVES

Estimates of reserves classified according to the following are:

a. MINERALS

The Philippines is rich in metallic and non-metallic reserves. Metal reserves are estimated at 11.2 billion metric tonnes, out of which nickel, copper and gold represent 33 per cent, 23 per cent and 4.3 per cent respectively, of the total volume. The volume of non-metallic deposits are estimated at about 20.0 billion metric tonnes, out of which cement raw materials, limestone, and marble represent 49 per cent, 31 per cent and 9.5 per cent respectively of the total volume.

b. FOREST RESOURCES

The Philippines is well-endowed with forest resources estimated at more than 16.9 million hectares in 1977. The vast expanse of about 12.9 million hectares of forest lands or 76.3 per cent are mostly concentrated in Luzon and Mindanao. Palawan and the Visayas account for 1.2 and 2.7 million hectares respectively.

c. FISHERIES

The Philippines is an archipelago with vast territorial and insular waters rich in fishing and aquatic resources. In 1975, the fishery sector produced 1.2 million metric tonnes of fish; 55 per cent came from marine municipal production, 37 per cent from commercial production, and 8 per cent from brackish fish production. For fry production, the country has an estimated production of 465 million milk-fish fry.

d. ENERGY

As of 1977, exploratory findings revealed that the country has an oil potential of about 10 billion barrels. To date, there are 25 service contracts granted, 39 oil wells drilled with a total footage of 329,976 feet. So far, four discovery wells have been drilled, namely: Nido I and South Nido in Palawan offshore by City Service (US); and Sampaguita and Cadlao in Reedbank by American Oil Company. In the immediate future, it is expected that oil developed locally will supply 10 per cent of the country's oil requirements.

To date, out of a potential 6 billion barrels-oil-equivalent of coal, only about 0.5 million barrels-oil-equivalent have been used. Hydro and geothermal sources of energy exist in exploitable quantities of 50 million barrels of oil and 2.5 billion barrels of oil, respectively. Intensive efforts towards the development of geothermal, hydro and non-conventional sources of energy have already begun in anticipation of impact in the following decades.

2.3 History of Social and Economic Development

a. REHABILITATION PERIOD

At the end of World War I, the Philippines was extensively ravaged. The economy, however, quickly recovered and posted an annual compound growth rate of about 17 per cent (at 1972 prices) from 1946 to 1950. This is attributed to an intensive reconstruction and rehabilitation programme, the introduction of an industrialization programme, aided by a strong performance in the agricultural sector, which was partly stimulated by favourable export prices.

b. INDUSTRIALIZATION THROUGH IMPORT SUBSTITUTION

In the fifties, the major development strategy was industrialization through import substitution. Industrialization was promoted by a package of protectionary measures, low interest rates and an overvalued currency. A system of control was adopted limiting the importation of consumer goods and permitting the liberal importation of producer goods. Likewise, during the period, manufacturing concentrated mainly on the assembly or the finishing stage of processing of imported goods and materials.

Towards the end of the fifties, industrialization slowed down as urban markets for consumer goods reached their saturation point. The difficulties were aggravated with the slow expansion for markets in the rural areas and the sluggish employment situation. These events came about as a consequence of the excessive use of scarce capital in large-scale, capital-intensive types of industries.

c. POLICY READJUSTMENTS

The decade of the sixties was characterized by adjustments and relaxation of foreign exchange restrictions. New economic objectives were emphasized and efforts were undertaken to modernize the agriculture sector to ensure the increase in food supplies, rise in rural incomes and expansion in the purchasing power of people in the rural areas. For the period, 1960-65, GNP grew at an average of 5.6 per cent.

At the outset of the seventies, devaluation was resorted to since growth in the industrial sector had decelerated and the balance of payments reflected a big deficit. The economy suffered because of the adverse impact of international monetary disequilibrium and unsettling domestic events such as the floods in Luzon, droughts in Mindanao and pockets of civil disorder.

d. NEW SOCIETY

The years 1973-77 saw the emergence of the oil-producing countries as a potent economic force and the growth in importance of regional economic blocs. As a response, the Philippines effected new ties with socialist and other countries and adopted energy conservation measures. Investments were directed to the country's preferred lines of activities which supported food-sufficiency, industrialization and social development objectives.

The drive towards agricultural development manifested itself in different forms: self-sufficiency in production; mobilization of credit and government resources toward food production; initiation of the farmer institution, Samahang Nayon Movement; expansion in rural household income; and the implementation of the land reform programme which substantially improved the distribution of wealth throughout the country.

The industrialization thrust was boosted by the development of small- and medium-scale industries; the rationalization and regional dispersal of large-scale industries; and the strengthening of economic cooperation among members of the Association of Southeast Asian Nations (ASEAN).

Finally, it was at this stage of development that improvement in the well-being of every Filipino through self-reliance was stressed. Social programmes in education, health, nutrition and housing were intensified and became more extensive.

2.4 The Operation of the Economic Sectors

During the period 1973-76 agriculture, forestry and fishing had on the average a share of 31 per cent of the total net domestic product *(NDP)* with an average annual growth rate of 5.3 per cent at constant 1972 prices. The industrial sector had a share of 27.7 per cent with an average annual growth rate of 7.4 per cent whereas the services sector had a share of 41.3 per cent with an average annual growth rate of 5.7 per cent.

During the 10-year Plan period, agriculture, fishery and forestry will act as the solid base of the economy while industry, spearheaded by the manufacturing sector, will be the growth pace-setter. A major turning point will take place in 1978 and 1979. Agriculture and industry will exhibit almost similar shares of output to total net domestic product. After 1979, industry will account for an increasing share of total NDP while agriculture will follow an opposite trend.

The agriculture sector will primarily be a supplier of foodstuffs and raw materials to the industrial sector, a source of internal effective demand, especially for industrial goods and a reliable source of employment. While agriculture will experience a declining share in total net domestic product, valuewise, the sector will still expand at an average annual rate of 5.3 per cent from 1978 to 1984.

As the pace-setter of economic development, industry is targeted to grow by 10 per cent annually from 1978 to 1982 rising further by 11.4 per cent annually in the second 5 years. Its share to total NDP will jump from 27.7 per cent in 1976 to 36.9 per cent in 1987.

As the level of economic activity accelerates, the demand for productive services correspondingly grows. Thus, the service sector, registering a 41 to 39 per cent share to NDP is targeted to expand by 7.4 per cent annually as compared with 5.7 per cent during the period 1975-1976.

2.4.1 GROSS DOMESTIC CAPITAL FORMATION

As the reversal of the roles of agriculture and industry takes place, necessary infrastructure support for the distribution of goods and durable equipment for accelerated industrial activity must be provided.

The period 1973-76 experienced a very high growth rate in investment. Gross domestic capital formation increased at an annual compound rate of 17.3 per cent. Broken down into components, fixed capital formation increased at an annual rate of 21.6 per cent and stocks increased at a rate of 4.3 per cent. Investment in communication had the highest average rate of growth: 29.5 per cent. This performance was partly due to a carry-over of the bullish 1973 economy and of the feverish construction work in public infrastructure and tourist facilities. A mild deceleration can, however, be expected as construction activities slow down considerably. Investments in durable equipment declined by almost 6.5 per cent. Such was also manifested in the absolute reduction of the country's import of capital good in 1976. (See Table 2.3 of Development Plan, pages 2-3.)

Gross investment or gross domestic capital formation is targeted to grow at 8.4 per cent per annum from 1978 to 1987. A slower rate, but more realistic. Fixed investments consisting of expenditures for construction and durable equipment will grow at a faster rate of 9.4 per cent due to the targeted expansion in production efforts. Both government and private sectors will have increasing percentage shares to GNP. The government will post a high annual rate of growth of 12.1 per cent from 1978-82 declining to 11.3 per cent in 1982-87. The private sector, on the other hand, will account for an increase from 8.6 per cent in 1978-82 to an 8.8 per cent growth rate in 1982-87.

2.4.2 THE OVERALL NET DOMESTIC PRODUCT AND ITS MEASUREMENT

a. Net Domestic Product by Industrial Origin

In the next ten years (1978-87), *NDP* will increase from 63,920 million pesos in 1977 to 135,893 million pesos in 1987. Net domestic product is targeted to grow at an annual rate of 7.7 per cent from 1978-82 and an average annual rate of 8.1 per cent in 1982-87. Compared to the annual rate of 6.1 per cent during the period 1973-76, the NDP will double in ten years time. By 1987, the shares of agriculture and industry are expected to be 24.3 per cent and 36.9 per cent, respectively. The service sector will account for the remaining 38.8 per cent of the total NDP.

Developments in the world economy have profoundly affected the trend of Philippine economic performance. The real gross national product (GNP) in 1972 prices registered a record growth of 9.6 per cent in 1973 decelerating to 6.3 and 5.9 per cent in 1974 and 1975 respectively. Slight improvement was registered in 1976 as GNP posted a 6.4 per cent growth which was offset by the drop to 6.1 per cent in 1977.

The decelerated economic performance was the product of rising prices of imports, dropping prices of major traditional exports, and increasing trade protectionism. Despite the slow recovery of major world economies, however, the country experienced an improving economic position. On the whole, the economy exhibited creditable performance overcoming obstacles such as an energy crisis, inflationary pressures, unnecessary trade and natural calamities.

In the next 10-year plan period, the economy will solidify the gains from the institutional and administrative changes introduced in recent years. Gross National Product is targeted to grow from 7 per cent per year in 1978 to 8 per cent in 1981 and 1982. The attainment of these targets hinges on the ability of the national economy to generate enough financial resources to support its investment requirements. The citizenry's participation in the development process is critical particularly in terms of the capacity to respond to new challenges and to share the burden of financing through greater voluntary savings and taxes.

The investment programme will provide physical structure for attaining the economic and social development. Efforts will be directed towards the building up of economic infrastructure to support agricultural modernization and industrialization. At the same time, emphasis will also be placed on the provision of mass-based services.

A correspondingly high saving effort is needed. The household sector will be the major supplier of savings to eliminate undue dependence on foreign borrowings. The government will, likewise, intensify its revenue collection programme. Net foreign capital inflow will be reduced from the present 6.5 per cent to 4.9 per cent in 1978 and 1 per cent in 1987. This will be made possible by intensified domestic resource mobilization, export expansion and a stronger domestic capability to produce traditional inputs in the decade.

2.4.3 ROLE OF THE RURAL SECTOR

The basic objective of the current thrust in the development of regions is to effect equity of opportunity for each region to exploit its full potential with respect to its demographic, economic, social, political and environmental resources. The intent is to make the development of depressed and lagging regions grow at rates faster than the relatively more developed regions in order to lessen regional inequalities without unduly hindering the growth of the latter regions nor slowing total national development. Regional development will proceed through a concerted scheme of integrated rural development. This approach focuses on the integration and coordination of development activities into one massive undertaking to achieve the desired end of socio-economic progress for backward areas. This will be complemented by the creation of an effective development communication network which is expected to strengthen and mobilize popular participation at the regional and local levels.

2.5 *Allocation of Government Investment Expenditures Per Capita by Region*

Region IV or the Metro Manila Area registered the biggest per capita regional allocation of current expenditures of P. 1217.01 and capital expenditures of P 450.29, or a total of P 1667.30 in CY 1976.

In contrast, the Southern Tagalog Region or Region IV–A, showed the lowest per capita regional allocation of government expenditures with current expenditures amounting to only P 42.93 and capital expenditures to P 0.28.

Next to Metro Manila, the depressed regions, namely, Cagayan Valley (Region II), Eastern Visayas (Region VIII) and Northern Mindanao (Region X) received the largest per capita regional allocation of current national government expenditures with P 123.78, P 110.37 and P 107.46 respectively. On the whole, these regions received a substantially larger share of per capita regional expenditures exceeding P 100 as compared to the other regions. This reflects the government's concern for the development of lagging regions (see Table 2.1).

2.6 *Balance of Trade*

During the period 1973-76 balance of trade in the Philippines changed from a positive US $240.6 million to a negative US $106 million. During the same period net terms of trade (the ratio of the export index with the import price index) changed from 113.3 to 77.7 (with 1972=100). Thus, one of the reasons for the unfavourable balance of trade is the unfavourable terms of trade.

World-wide inflation and the oil crisis affected the value of imports more than the value of exports. Requirements of domestic industries for imports also increased during that period, particularly in the year 1976.

During the next ten years, 1978-1987, export earnings are targeted to grow by an average of 18.8 per cent per annum and import payments by 16.2 per cent per annum. A trade deficit of $897 million will result in 1987, a dramatic improvement over the $1,313 million deficit in 1982.

Non-manufactured exports will continue to account for the bulk of total export earnings although they will become a declining share. Major export expansion will be generated by exports of manufactured products which will account for 50 per cent of total exports by 1987.

Imports will continue to increase in response to the growing requirements of domestic industries for raw materials, energy and durable equipment.

2.7 *Bottlenecks of Development*

a. Inadequacy of Basic Needs

The yearly 3 per cent increase in real per capita income in the last four years has not appreciably improved the living conditions of the urban and rural poor. This relatively large segment of the population continues to lack the basic amenities, i.e. food, clothing, shelter.

b. INCOME INEQUALITY

The personal and geographical maldistribution of income and wealth can be clearly gleaned from the results of the 1975 Family Income and Expenditure Survey.[1] Preliminary data show that the top 30 per cent of income recipients account for 63.9 per cent of total income. The middle 40 and lowest 31 per cent of families received only 26.4 per cent and 9.7 per cent of total income, respectively.

c. UNEMPLOYMENT AND UNDEREMPLOYMENT

The August 1976 Labour Force Survey[2] reports that 790,000 people, or 5.2 per cent of the total labour force, were unemployed. A large underemployment rate of 10.7 per cent was also registered indicating the shortage of productive employment in the country.

d. HEAVY PRESSURE OF RAPID POPULATION GROWTH

The most optimistic projection places population growth at 2.3 per cent in the next decade. This expected addition to the country's population will entail bigger social and economic costs.

e. BALANCE OF PAYMENTS AND PRICE INSTABILITY

As a highly open economy, the Philippines will continuously be affected by external disturbances such as regional blocs, economic protectionism, growing resource nationalism and constant threats to the stability of the international monetary system. The impact of these events will be heavily felt in the country's balance of payments and international reserves position, and in the corresponding fluctuations in domestic prices.

f. ENERGY CONSTRAINT

About 90 per cent of the country's energy requirements are derived from imported petroleum. Thus, the rise in oil prices correspondingly strains the country's balance of payments and pushes up production costs in a wide area of economic activities.

g. ENVIRONMENTAL PROBLEMS

The rapid expansion of human settlements and accelerated development activities have resulted in a number of environmental problems such as air and water pollution, soil erosion, floods, drying lakes and rivers, etc. Environmental protection measures will have to be instituted to ensure that economic development will not further impair environmental quality.

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[1] *Family Income and Expenditure Survey*, 1975 (Special release no. 191, National Census and Statistics Office, Manila, April 20, 1977).

[2] Labour Force Survey, 1976 (*National Sample Survey of Households Bulletin*—National Census and Statistics Office, Manila, August 1976).

h. Regional Growth Disparities

A number of regions lag behind the more developed ones in terms of growth, employment and the provision of basic services to their growing populations. Also, the rapid migration of population to a few urban centres has resulted in congestion problems such as serious unemployment, lack of decent housing facilities and inadequate health services.

2.8 Characteristics of the Population—Regional Distribution of Population by Age and Sex

a. Population by Region

As of 1975 the Philippines has a population of 43.0 million distributed over these areas: 54.4 per cent in Luzon, 23.7 per cent in Visayas and 21.8 per cent in Mindanao. Ranked according to population size, percentage distribution of the region are: Region IV (12.5%), Region IV-A (11.9%), Region III (10.2%), Region VI (9.4%), Region VII (8.1%), Region I (7.8%), Region V (7.6%), Region XI (6.5%), Region VIII (6.2%), Region X (5.5%), Regions IX and XII (4.9% each) and Region II (4.6%).

b. Population by Sex

The population is slightly dominated by males; 50.6 per cent of the populace are males and 49.4 per cent are females. Except for Region I (Ilocos), Region IV (Metro Manila) and Region VII (Cebu), all the regions have a predominantly male population. Among these regions, Region IV–A or Southern Tagalog has the biggest concentration of males (12.5 per cent) and also females (12.4 per cent). The widest difference in sex distribution is found in Metro Manila where females account for 51.1 per cent.

c. Population by Age—(dependency structure)

The age structure of the population can be assumed to approximate three phases of life: youth (0-14), adult (15-64), and old age (65 years and over). As of 1975, the youth and the aged comprise 44.0 per cent and 2.9 per cent of the total population while the working-age population accounts for 53.2 per cent of the total. Consequently, the dependency burden is 89 at the national level.

At the regions, Metro Manila has the least proportion (37.1) of young persons and Bicol has the highest proportion (47.6). Hence, the dependency ratios of these regions are 64.5 and 102.4.

d. GROWTH OF POPULATION

The population in 1970 annually grew by 2.7 per cent reaching 43.0 million in 1975. Among the regions, Region IV-A grew fastest at 4.7 per cent closely followed by Region IX at 4.3 per cent. On the extreme end, Region XII experienced the lowest yearly growth rate of 1.3 per cent. Out of the 13 regions, six regions grew at yearly rates of less than 2 per cent.

e. URBAN-RURAL MIGRATION OF POPULATION

The overall deceleration in the rate of urban growth reflects a general slowing down in the rate of rural-urban migration for the period 1960-70, and perhaps the added effect of a drop in the rate of natural increase for the period 1970-75. However, the highly aggregative estimates of the contribution of migration to urban growth tend to obscure the major origins of urban-destined migration. The National Demographic Survey of 1973 gives data on the different migration streams, for both lifetime (birth-1965) and recent (1965-1973) moves. Prominent among the earlier migration streams, i.e. lifetime, was the rural-rural migration flow, followed by the rural-urban, and, rural-Manila streams.

As expected, Manila was singularly more prominent than other urban areas as far as destinations are concerned.

Survey data on the factors that have tended in the past to influence the decisions of migrants in choosing a particular area to settle in, within a given number of alternative areas, lend some insight into part of the decision-making process involved in migration. For all urban and metro-bound migration streams (for both sexes), the majority of lifetime and recent migrants generally chose a particular residence because of the presence of relatives in the area. This clearly points to risk minimizing behaviour, or an attempt to ease the uncertainty of moving to a new environment. Generally the second most cited reason for choosing a particular place to settle in was the availability of jobs and services.

It is interesting to note that for both lifetime and recent migrants, the least mentioned reason for choosing a particular residence was the availability of educational facilities. In general though, a slightly larger proportion of recent migrants compared to lifetime migrants chose a particular residence on the basis of the availability of educational facilities.

With reference to inter-regional migration patterns among persons 15 years old and over (for 1965-73), the principal stream was the rural to urban migration in all the regions except for Mindanao and Central Visayas where inter-regional rural-rural migration was more dominant. But generally, rural-urban migration as a per cent of all migration was higher in poor regions than in the richer ones.

Historically, in the decade 1960-70, inter-regional migration remains high compared to the previous decade. Traditional destinations were MMA and Mindanao while the dominant out-migration areas were the Visayas and Bicol regions.

2.9 *Educational Profile*

While the details of educational development will be given in the succeeding chapter, the following section briefly presents an educational profile of the country.

a. LITERACY

The Philippines records one of the highest literacy rates, even when compared with developed countries. In 1970, 83.4 per cent of the population 10 years old and over, compared to 72 per cent in 1960, were able to read, write and understand a simple message in some language or dialect. However, some 4 million or 16.6 per cent of the total population were considered illiterate. The majority of illiterates most likely consisted of cultural minorities in provinces such as Cotabato, Sulu, Lanao del Sur, Ifugao and Mountain Province.

b. HIGHEST GRADE COMPLETED/SCHOOL ATTENDANCE

Among the adult population (25 years old and over) in rural areas, about 2 million or 25 per cent were reported in 1970 with no grade completed and about 4 million or 44 per cent left school before completing the elementary level. The 1970 Census reported that of the 7 million youths in the 15-24 age group, some 5 million or 70 per cent were not attending school. Among these young adults not attending school, less than 15 per cent completed high school or some post secondary courses. The majority were either elementary graduates (30 per cent), elementary school dropouts (36 per cent) or high school dropouts (13 per cent).

c. School Enrolment

During the 1960-70 period, the population 6-24 years old increased by 40 per cent. School attendance almost doubled. School participation rates of children 6 to 14 years old increased from 49 to 63 per cent and of youths 15 to 24 years old from 19 to 30 per cent (see Table 2.2).

Elementary enrolment increased from 4 million in SY 1961 to 7 million in SY 1971 at an average annual growth rate of 5 per cent. High school enrolment grew by 10 per cent annually during that decade, increasing from 0.7 million in SY 1961 to 1.7 million in SY 1971. At the tertiary level, available enrolment data indicate increases in annual growth rates during the 1970's compared to the 1960's. From SY 1971 to SY 1972, enrolment grew by 5.4 per cent compared to 2.6 per cent annually during the SY 1968-1971 period.

2.10 *Health and Nutritional Status*

a.. Health

The crude birth rate showed a general decreasing trend from 40.0 per 1,000 population in 1970 to 37.0 per 1,000 population in 1975. Similarly, the crude death rate experienced a downward movement from 11.8 per 1,000 population in 1970 to 10.8 per 1,000 population in 1975 but at a faster rate of decline (1.8 per cent compared to CBR's 1.6 per cent).

The ten leading causes of deaths in 1974 accounting for 174,644 deaths and representing 61.5 per cent of total deaths from all causes can be classified as follows:

(a) Communicable diseases—pneumonia, tuberculosis, gastroenteritis, bronchitis and tetanus.

(b) Degenerative diseases—diseases of the heart and diseases of the vascular system.
(c) Avitaminoses and other nutritional deficiencies.
(d) Malignant neoplasms.
(e) Accidents.

Pneumonia has consistently been the leading cause of death averaging 17.1 per cent of total deaths from 1969 to 1973 but declining to 16.2 per cent in 1974. Tuberculosis of all forms followed closely with a death rate of 74.9 per 100,000 population in 1974, up from the 74.5 yearly average registered from 1969 to 1973.

Mortality trends show a marked decline in deaths caused by communicable diseases from 1969 to 1973 as a result of improved health care and expanded health services. A notable increase in deaths due to chronic degenerative diseases, accidents and malignant neoplasms on the other hand, can be observed—a product of growing urbanization and industrialization.

b. NUTRITIONAL STATUS

The Operation Timbang (OPT) results revealed that 47.3 per cent 0-6 year old children are suffering from first degree malnutrition. Regions I, II, III, V, VI and VIII recorded high percentage of third and second degree of malnutrition. These Regions except for Ilocos Region fall under the classification of "depressed areas", and they now have priority for the nutrition programme.

On account of nutritional inadequacies documented by the Food and Nutrition Research Institute the government has set a standard target for the nutrition needs of the population. These targets were derived on the basis of the following criteria: body weight, adequacy of nutrient intake, food availability, eating patterns and type of physical activity.

2.11 Housing

a. DWELLING UNITS

In 1970, there were about 6.2 million households in the country of which 1.9 million or 30.6 per cent were found in the urban areas and 4.3 million or 69.4 per cent in the rural areas (see Table 2.3).

A total of 6.1 million dwelling units were reported in the May, 1970 Census. The rural areas claimed 69.8 per cent of the dwelling units and the urban areas, 30.2 per cent. The majority (88.5%) of the dwelling units were of the single house type of structure. In the urban areas, the preference was for apartments or accessorias, while in the rural areas, the barong-barong[1] was the more predominant type.

Households occupying one dwelling unit numbered 5.9 million or 95.4 per cent of the total. Households sharing a dwelling unit with another household was estimated at 3.6 per cent. Most households in both urban and rural areas lived on a one household per dwelling unit basis (92.2 per cent for urban and 96.9 per cent for rural). The multiple household type was more common in the urban areas where population is more dense.

b. LIGHTING FACILITIES

About 4.6 million households or 75.5 per cent used kerosene for lighting. Electricity was used by 23.2 per cent while oil and other fuels by 1.3 per cent.

About 60.3 per cent of urban households used electricity compared to only 6.8 per cent of their rural counterpart. On the other hand, 91.7 per cent of rural households were dependent on kerosene for lighting needs in contrast to only 39.0 per cent of the urban households.

c. WATER SUPPLY

The major sources of water were the pump, piped water and open well which were used by 28.8, 24.0 and 22.4 per cent of the total households, respectively. More than half of 54.3 per cent of urban households used piped water while 25.3 per cent relied on the pump for their water supply. In contrast, the pump and open well were the major sources of water in the rural areas with the former servicing 30.3 per cent and the latter, 29.7 per cent of rural households.

2.12 Employment

Employment stood at 14.7 million in 1976 with the bulk of the employed in the agriculture sector. Meanwhile, the unemployment rate was 5.2 per cent and underemployment, 10.7 per cent.

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[1] Barong–barong is a Filipino term for make shift houses usually made of wood and nipa thatches.

2.13 Family Income and Expenditure Pattern

The preliminary results of the 1975 Family Income and Expenditure Survey revealed that there had been a marked improvement in the distribution of total family income between 1971 and 1975. Unlike in 1971, the upper half of the total number of families accounted for about 83 per cent of the income. By 1975, the lower half of the families, particularly the two lowest groups, increased their share of total income, whereas the upper decile groups, except the top 10 per cent, reduced their relative share. Although the most affluent families improved their relative share by 1.7 per cent the poor families have substantially improved their economic conditions.

The national median family income in 1975 was P. 5,840 while the national median family expenditure was P. 6,526. Metro Manila exceeded both the national median for income and expenditure by P. 4,629 and P. 3,722, respectively. Region XI, Southern Mindanao, followed next surpassing the national median income by P. 467 and the national median expenditure by P. 598. The rest of the regions have an average income of P. 5,744 to P. 4,280, with Region X, Northern Mindanao Region, registering the lowest average income, P. 3,803. On the expenditure side, Metro Manila and Regions III, IV, IX, XI and XII exceeded the national median expenditure. Except for the Metro Manila, all regions recorded greater expenditures than income.

2.14 Implications of Population Characteristics on Education and Manpower Development Policy

a. EDUCATION

Viewing the structure of the population in terms of school-age population, the formal school system is expected to absorb about 14 million students by 1987. The size of the youth group 7-24 years old is expected to reach 23.5 million, or 40 per cent of total population, in 1987, increasing gradually and maintaining an annual total of 20 million for the period 1978-82.

b. LABOUR

The total work force in the country increased from 13.4 million in 1973 to 15.4 million in 1976. The labour force grew at an annual rate of 4.8 per cent during that period.

From the labour standpoint, by 1987 some 22.5 million workers, or 63.1 per cent of the population compared to 62 per cent in 1978-82, will be seeking jobs in the labour market. In 1987, about 6.6 million young and inexperienced workers (15-24 years old) will be looking for work. Annually, between 1978 and 1987, about 1 million 7-14 years old and 3 million 15-24 year olds will be out of the formal educational system. The employment situation therefore seems grim in the future.

2.15 The Development Strategy of the Country—the Social, Political and Economic Goals. The Strategy for Distribution of Income and other Social-Benefits. The Development Strategy of Education within the Framework of the Overall Development Strategy. The Role of Higher Education within the Educational Development Strategy.

2.15.1 NATIONAL DEVELOPMENT GOALS

As contained in the Five-Year Philippine Development Plan 1978-82, the National Development Plan Goals are:

(a) Promotion of social development through:
  —creation of productive employment opportunities,
  —reduction of income disparities,
  —improvement of the living standards of the poor, and
  —enrichment of social and cultural values;
(b) Attainment of self-sufficiency in food and greater self-reliance in energy;
(c) Attainment of a high and sustained economic growth;
(d) Maintenance of an acceptable price level along with improvement in domestic resources mobilization and balance of payments position;
(e) Increased development of lagging regions, especially rural areas;
(f) Improvement of habitat through development of human settlements and proper management of environment; and

(g) Maintenance of internal security and harmonious international relations.

2.15.2 STRATEGY FOR DEVELOPMENT

The strategy for development described in the Five-Year Philippine Development Plan 1978-82 is two-pronged: (1) attainment of a dynamic and balanced economy (particularly through increased agricultural and industrial production, trade diversification and rationalization, transformation of the energy structure, application of science and technology, and proper management of natural resources and environment), and (2) more equitable access to social development opportunities and fuller utilization of human resources in nation-building.

a. BALANCED GROWTH STRATEGY

Increased production alongside better distribution of income and opportunities requires a strategy that provides for balance among sectors and among regions which are mutually reinforcing. Industrial development will be pursued to complement agricultural development. At the same time, the service sector will be oriented toward improved efficiency in order to support the rural sector and provide the necessary dynamic push to the economy.

Support to rural and regional development will not be limited to agricultural production but will include tenurial improvement, institution building and industrial dispersal. An integrated area development scheme will be implemented. This approach, which involves a comprehensive planning and development of complementary projects, will lead to a more balanced rural and regional growth.

b. AGRICULTURAL DEVELOPMENT

To attain self-sufficiency in food and to raise farm incomes, concerted efforts will be directed towards the development of rural areas in general. This will require the increased provision and improved delivery of essential agricultural inputs such as, among others, credit, extension work, marketing facilities and infrastructure, particularly irrigation and feeder roads.

The agrarian reform programme will be directed towards increasing the productivity and income of agrarian reform beneficiaries. The role of farmer organizations, particularly cooperatives, will be expanded in the areas of marketing and mobilization of rural funds.

C. INDUSTRIAL DEVELOPMENT[1]

Industry will become a dominant economic sector; after 1979 industrial development will be accentuated so that the industrial sector will become export-oriented. Exports will generally consist of canned food items, textile and garments, electronics and engineering products related to the progressive car manufacturing programme.

Greater trade with the ASEAN member-countries will develop concomitant to industrial expansion. Therefore, the Philippines will have greater assurance of better market stability and bigger market outlets for its industrial goods. Schemes to institutionalize market arrangements among the ASEAN nations may come in the form of industrial complementation programmes and cartel-like integration, which will characterize the economic relations of the Philippines with other developing countries. It is expected that with intensified economic linkages, the Philippines' volume of trade will expand and diversification of exports will be further enhanced. Diversification of trade with socialist countries, which has begun, will show more prominence in the years to come.

Communication is a vital component of high-level industrialization. Thus, stress will be placed on further research in communication technology to bring about improvements in the communication system and communication techniques. Transport systems are envisioned as utilizing less fuel-consuming vehicles. In this case, a massive railway system will be the dominant means of transport in many urban areas, especially in Metro Manila. To meet these transportation needs, the country's vehicle population will rise from 570,000 to 2.5 million in 2000.

An offshoot of this high-level industrialization, sustained economic growth, and development will be a substantial development of leisure industries. This type of industry has already been boosted by the growth of tourism. With local clientele the leisure industries are expected to evolve toward becoming socially desirable services such as out-of-home food industries, domestic tourism, better appreciation of scenic spots, parks, plaza and greater development of the theatre, performing arts, etc.

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[1] Soriano, Emmanuel, "The Philippines in the Year 2000" (mimeographed), Manila, undated. Jurado, Elsa, "The Filipino Experts' Views of the World in the Year 2000" (mimeographed), Manila, undated

The industrial sector will be rationalized towards greater export competitiveness and greater linkages with the countryside. Industry will head towards increased processing of domestic products, particularly those for export; strengthening of industrial linkages; and development of cottage, small- and medium-scale industries, particularly in the less-developed regions of the country. The thrust is expected to shift gradually towards second-stage import substitution through the domestic production of presently imported intermediate goods.

Industries will increasingly be dispersed to the various regions of the country. Industrial estates will be set up in a number of regions based on their comparative needs and resource bases of the industries.

d. TRADE DIVERSIFICATION AND RATIONALIZATION

Export expansion and substitution and import rationalization will be the main concerns of the trade sector. The export of new manufactured goods will be intensified without sacrificing domestic sufficiency. The rationalization of imports will be aimed at sufficiently providing the country's development requirements while local capability is being developed. Thus, identification and domestic production of imports will be diversified to minimize undue dependence on particular countries.

e. TRANSFORMATION OF THE ENERGY SOURCE STRUCTURE

The attainment of a stable, economical and environmentally acceptable energy supply hinges on the implementation of a two-fold energy strategy, viz.

(i) Aggregate energy demand will be minimized through greater end-use efficiencies and restructured consumption patterns in the direction of indigenously-based energy sources;

(ii) Energy sources will be diversified to reduce dependence on oil. At the same time, the commercial origin of oil will be expanded to lessen the risk of supply disruptions inherent in dealing with a few, or an homogenous bloc, of suppliers.

f. APPLICATION OF SCIENCE AND TECHNOLOGY

Development efforts during the Plan period will be supported by an intensified application of appropriate science and technology. The full utilization of indigenous materials in the pursuit of both national and sectoral objectives, particularly in agriculture, industry and energy, will be encouraged. A system will be designed to improve the dissemination, commercialization and full acceptance of critical research results.

g. ENVIRONMENTAL MANAGEMENT

The attainment of a balanced economy calls for a careful management of the environment. Development activities will be spatially located in conformity with environmental equality standards for air, water and land. Human settlements will be properly sited with due consideration for maintaining the ecological balance of artificial and natural eco-systems.

Likewise, environmental education will be developed to arouse awareness and active participation of the citizens in environmental management. Epidemiological studies will be undertaken to assess health hazards of various activities. Endangered species of the country's flora and fauna will be inventoried and conserved.

h. HUMAN RESOURCE DEVELOPMENT

The country's population is an important resource with a great productive potential. Thus, human resource development is viewed more as an investment than as a final consumption. The strategy for developing the human resource base calls for the improvement of its physical, intellectual and material well-being.

To promote the physical aspect of human resource development, health, nutrition and housing services, especially for the low-income population, will be expanded. The efforts of the government and the private sector will be coordinated and integrated to upgrade these services and broaden their coverage, particularly in the rural areas.

Meanwhile, the educational system will be reoriented to make it more relevant to the country's development requirements. Likewise, the system will have to be restructured to motivate a change in the people's attitudes and values. Educational and training opportunities have to be democratized to allow more people to participate productively in the development process. Standards in education and manpower development have to be upgraded.

Manpower will be employed under just terms and conditions. Labour-intensive activities in agriculture, industry and services during the Plan years will provide more productive and better income-earning opportunities for the people. In addition, entrepreneurship will be promoted for small-scale projects; skills for middle-level and rank-and-file positions will be upgraded. Women will be accorded equal opportunities for work.

2.16 Self-Reliance: Critical in Accelerating Industrial Development

The present estimated population of 46.4 million will still be growing at the rate of 2.9 per cent until 1987, and a slower growth later until 2000. The growth in population will put some pressure on resource adequacy especially on food and basic social services. As a response, efforts should be concentrated on food production, especially on cereals. To date, the Philippines has achieved self-sufficiency in rice. Nonetheless, food and global agricultural development remains a high priority as the base for industrial development. The agricultural sector will continue to play a vital role in development. It provides food, raw materials, the required capital as well as the market that will propel development.

Conscious of the limits of available resources, the Philippines will venture into the ocean's frontiers. The country will explore the utilization of marine resources as a possible source of food. It will also continue its intensive off-shore oil explorations, for oil is a vital element in the acceleration of industrial development.

2.17 Summary and Conclusions

Educational development in the Philippines must be geared to the fulfilment of the aspirations of the people and economic development. The political framework provides the basis for socio-economic development.

Insofar as political scenario is concerned, continued search for a political process that will unravel the present political milieu will be a major pre-occupation of Philippine society. There will be some political confrontation. But more compromising attitudes and political accommodations will also dominate the political setting. However, the primordial objective of accelerating development and the very impatience of the people to attain a better quality of life will militate for a greater dominance of the authoritarianism in politics.

Technocracy in the government will continue as long as development remains the priority of the nation. But technocracy alone is not sufficient to achieve equilibrium in society. Thus, the present system will allow political accommodations to maintain political stability: the technocrats will slowly become politicians vis-à-vis politicians who will slowly become technocrats. Meanwhile, the "old type" of politicians will be gaining some visibility as the link between the highly-technocratic government and the people. They will articulate the needs and aspirations of the people in the same manner that they will communicate to the people the programmes of the government.

While there will continue to be a power centre, there will evolve regional political units which are semi-autonomous in nature. Somehow, this arrangement will diffuse the locus of both power and political complexities, thus achieving some form of political cohesion and social equilibrium. However, the re-distribution of power to the regional political units will result in increasing sophistication and better managerial capabilities within the various regional political units. The success of the sharing of political power with the regional political units will depend substantially on the capabilities of the region to discharge its functions. This will also depend on the manner by which the central authority is able to attain participatory democracy.

The overall conditions of the country, including the current Five-Year Development Plan's thrust, have one way or the other affected the labour market. The effects or implications may be summarized as follows:

(a) The present economic system, where the public sector involves itself in vital projects or business ventures that private enterprise could not undertake, considerably improves employment opportunities. Government sponsored projects immediately open new jobs that otherwise could not have been created or would have been postponed.

(b) Increased community participation, particularly barangay projects that are developed and implemented in the area, encourages and greatly enhances the possibility of the employment of people living within the vicinity.

(c) The exploitation of the country's rich resources will enhance the ability of the economy to generate employment. This will be especially true with forward integration, or linkage, in mining, fishing and logging.

(d) The prevailing structure of the economy, which is basically labour intensive, utilizes existing unskilled and semi-skilled type of labour. This is best exemplified in the proliferation of small- and medium-scale industries or cottage-industries, which provide the bulk of the country's non-traditional exports.

(e) The nation has a sizeable supply of labour equipped with minimum skills and education. Higher in the hierarchy, however, skilled labour becomes scarce despite a large supply of college graduates.

(f) As is envisioned in the Five-Year Development Plan, 1978-82, employment will be 18.5 million in 1982 constituting 96 per cent of the total work force. The bulk of the new entrants to the labour force will gradually move away from agriculture to the non-agricultural sectors such as industry and services. Agriculture will employ 8.4 million, industry 2.8 million and the services sector, 7.1 million.

Education can only achieve greater relevance if it contributes to the attainment of a better quality of life. Thus, education must focus upon acquiring capabilities for improving the Philippine experience in development in such areas as health and nutrition, income and consumption, social mobility and poverty, etc. It must define its role in the systematic development of rural and urban areas, in enhancing high-level industrialization, in attaining self-reliance in basic needs and resource adequacy, and in strengthening the society's political system.

In more concrete terms, education must be able to improve the efficiency of present and future manpower stock—up to three times its present level. This is necessary in order to attain the country's income growth projection.

To what extent the education system can be responsive to these needs is the subject of discussion of the following chapters.

Table 2.1 *Per capita regional allocation of national government expenditures, CY 1976 (In P)*

Region	*Population (1976)*	*Current*	*Capital*	*Total*
I	3,404	110.74	31.07	141.8
II	2,006	123.78	42.67	166.45
III	4,591	77.14	59.00	136.21
IV	5,489	1217.01	450.29	1667.30
IV–A	5,010	42.93	0.28	43.21
V	3,339	84.03	16.84	100.87
VI	3,988	89.66	14.69	104.35
VII	3,472	77.13	16.50	93.63
VIII	2,583	110.37	21.39	131.76
IX	2,337	85.16	21.54	106.70
X	2,554	107.46	20.35	127.81
XI	2,982	77.58	16.89	94.48
XII	2,446	82.23	36.34	122.57
Philippines	**44,201**	**237.28**	**97.22**	**334.50**

Source: Budget Message, 1976.

Table 2.2 *School participation 1960 and 1970 (In thousands, except per cent)*

Age groups	*Attended school*		*Population*		*School participation rates (per cent)*[3]	
	1960[1]	*1970*	*1960*	*1970*	*1960*	*1970*
Total 6 years old and over	4,541.8	8,309.9[2]	21,557.6	29,609.0	21.1	28.1
6–24 years old	**4,372.6**	**8,168.7**	**12,120.0**	**16,912.2**	**36.1**	**48.3**
6–14 years old	3,360.4	6,102.6	6,847.1	9.681.9	49.1	63.0
15–24 years old	1,012.2	2,066.1	5,272.9	7,230.3	19.2	28.6
25 years old and over	169.1	141.2	9,437.5	12,696.8	1.8	1.1

1. Excludes persons enrolled in kindergarten, vocational, trade and business schools.
2. Refer to attendance in schools or colleges, public or private, including night schools, with regular curricula recognized by the school system; About 9 per cent lower than the DEC total enrolment data for SY 1969–1970.
3. Persons who attended school as a proportion of the population by age group.

Source: National Census and Statistics Office. *Census of Population and Housing: 1960 and 1970.*

Table 2.3 *Housing indicators, 1970*

	Philippines	*Urban*	*Rural*
Number of households	**6,163,128**	**1,884,291**	**4,278,837**
A. Dwelling units			
Number	6,099,844	1,845,202	4,254,642
Type			
–Single	5,400,024	1,437,187	3,962,837
–Duplex	193,011	119,996	73,015
–Apartment/Accessoria	229,116	205,659	23,457
–Barong–Barong	222,004	42,961	179,043
–Commercial	49,492	36,647	12,845
–Industrial	1,981	1,412	569
–Agricultural	3,115	511	2,604
–Institutional	1,095	828	267
–Others	6	1	5
B. Lighting			
Electricity	1,428,445	1,137,273	291,172
Kerosene (Gas)	4,656,640	734,082	3,922,558
Oil	29,014	6,847	22,167
Others	49,029	6,089	42,940
C. Water Supply			
Piped Water	1,481,040	1,023,138	457,902
Artesian Well	526,336	179,759	346,577
Pump	1,774,985	477,287	1,297,698
Open Well	1,379,089	107,931	1,271,158
Spring	710,968	36,845	674,123
Rain Water	157,302	49,822	107,480
Lake, River, Stream etc.	133,408	9,509	123,899
D. Toilet Facilities			
Flush/Water Sealed	1,392,007	911,171	480,836
Antipolo Closed pit	979,689	360,318	619,371
Open Pit	1,413,469	225,152	1,188,317
Public Toilet	114,386	63,557	50,829
None	2,263,577	324,093	1,939,484

Source: 1970 Census of Population and Housing

Chapter 3

Development of the Education System[1]

3.1 Introduction

In the preceding chapter, the discussion on the structure, development and the future of the Philippine economy provides the framework for the operation of the total system and pinpoints some implications on education. A complement to such a discussion is an analysis of the development of the education system focussing on the extent the education sector has been responding to the developmental needs and investigating the capability of the sector to meet expectations. Chapter 3 aims to identify factors affecting the past development of the three levels of education and their rationale. This will serve as a basis for future direction of education to meet the targets of the national development plans, especially with respect to the training and utilization of highly qualified manpower.

3.2 The Development of Elementary and Secondary Education

3.2.1 THE ROLE PLAYED BY THESE TWO LEVELS IN THE SOCIO-ECONOMIC DEVELOPMENT OF THE COUNTRY

To sustain social and economic development, two elements are necessary: (a) functional literacy; and (b) high-level manpower. Functional literacy refers to the development of cognitive power, numerical manipulation and communication skills as well as the internalization of desirable attitudes necessary for betterment in the quality of life and society. Mainly, one can achieve functional literacy from the first through the second level of schooling. Technical training is emphasized at the second level of schooling. High level skills and professionalization are expected to be attained in tertiary education.

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[1] Chapter based on contributions from FAPE/EDPITAF/MEC

The attainment of functional literacy and high-level manpower is a product of consciously-designed programmes related to the political interest, religious predilection, and ideology of the sovereign power that is in control of the Government. During the Spanish regime, the emphasis of education was the Christianization of the Filippinos. Thus, many of the tutors were clergymen or Sisters of Charity who taught the 3 R's and Christian doctrine. It was only with the passage of the Educational Decree of 1863 that the organization of a system of primary education, with emphasis on religion, was established. Ironically, the system of higher education (which started with the founding of the University of Santo Tomas in 1611) preceded the organization of primary education.

Later, the Americans structured education to meet a desire for greater participation in the democratic process which, hopefully, would lead to self-government. A vast network of public schools was established with the Education Act of 1940. Changes were instituted in the educational system "in order to meet the increasing demand for public elementary instruction and, at the same time, comply with the constitutional mandate of providing public elementary education." Some of the features of the Education Act of 1940 are:

(a) Revision of the curriculum to make it conform to the educational objectives.
(b) Institution of compulsory primary education and six years of elementary education.
(c) Utilization of double-single sessions and the support of elementary education by the national government.
(d) Provision of opportunities for the development of practical skills such as gardening, shop work and club work for boys and home economics for girls.

During the Second World War, the Japanese Imperial Army tried to align education to Japan's grand design of an "east Asian Co-Prosperity Sphere". As such, the elementary curriculum emphasized vocational education and the development of practical arts which would establish a basis for a new pattern of life.

With the advent of the era of independence, elementary education emphasized the development of the citizen, inculcation of good moral values and character, acquisition of knowledge and skills to prepare one for life, and appreciation of and love for the national language. Prompted by the need for rural reconstruction and development, the community schools and basic education for out-of-school youth were also emphasized. The community schools were conceived of as an instrument for the improvement of quality of life, while the out-of-school youth programme was designed to equip one with necessary skills and desirable work attitudes.

In 1954, Republic Act 1124 created the Board of National Education (BNE), the highest policy-making body on education. Its task has been "to formulate, implement and enforce the general education objectives and policies, coordinate the offering, activities and functions of all educational institutions in the country with a view of accomplishing an integrated, nationalistic and democracy-inspired educational system of the Philippines." In 1957, the BNE defined a set of educational objectives:

(a) To inculcate moral and spiritual values inspired by abiding faith in God.
(b) To develop an enlightened, patriotic, useful and upright citizenry in a democratic society.
(c) To instil habits of industry and thrift and to prepare individuals to contribute to the economic development and wise conservation of the nation's resources.
(d) To maintain family solidarity, to improve community life, to perpetuate all that is desirable in our national heritage and to serve the cause of world peace.
(e) To promote the sciences, arts and letters for enrichment of life and recognition of the dignity of the human person.

In 1969, the Presidential Commission to Survey Philippine Education (PCSPE) was established by Executive Order 202, with Dr. Onofre D. Corpuz, then Secretary of Education, as chairman. The PCSPE observed "the need to define goals in more operational terms". The educational objectives set forth by BNE are "societal rather than educational tasks". In this light, the PCSPE recommended the following national goals and educational aims (which consequently, through Presidential Decree 6-A, became official):

1. National Development Goals
    1.1 To achieve and maintain an accelerating rate of economic development and social progress;
    1.2 To assure the maximum participation of all the people in the attainment and enjoyment of the benefits of such growth; and
    1.3 To strengthen national consciousness and promote desirable cultural values in a changing world.

2. National Education Aims
    2.1 To provide for a broad general education that will assist each individual in the peculiar ecology of his society, to: (1) attain his potential as a human being; (2) enhance the range and quality of individual and group participation in the basic functions of society; and (3) acquire the essential educational foundations for his development into a productive and versatile citizen.
    2.2 To train the nation's manpower in the middle-level skills required for national development.
    2.3 To develop the high-level professions that will provide leadership for the nation, advance knowledge through research, and apply knowledge for improving the quality of human life.
    2.4 To respond effectively to the changing needs and conditions of the nation through a system of educational planning and evaluation.

3.2.2 ELEMENTARY EDUCATION

Consistent with the above stated development goals and educational aims, the elementary education hopes "to provide the knowledge, skills, and attitudes which are basic for personal development and modern living in an expanding society". Moreover, this "basic education should provide literacy and develop in the individual cognitive power, numerical manipulation and communication skills."

Many political, social and economic benefits could be attributed to elementary education. For example, half of the industrial workers have only completed elementary schooling. Many more with elementary schooling are in the agricultural and other economic sectors. The measurement of the benefits of elementary education can be stated in terms of private rate of return and social rate of return. As per the Ranis Report,[1] the private and social rates of return are 8.0 per cent and 6.5 per cent respectively.

Despite its respectable rate of return, elementary education is still beset with some problems. Only 50 per cent literacy has been achieved in vernacular at Grade IV and a lower percentage in Filipino and English. In Grade VI, literacy in Filipino has improved to 75 per cent. Moreover, there is a high dropout rate; of 100 pupils who entered Grade I in 1966-67, only 55.8 per cent finished Grade VI. Thus, a child is already out of school before functional literacy is achieved.

As to the performance of elementary education, the Report of the Survey of Outcomes of Elementary Education (SOUTELE) reveals the following:

(a) Graduates of elementary schools have learned only 2/3 of what they should learn.
(b) Subject areas with the least learning are the fundamental subjects: reading, mathematics, and language.
(c) The pupils' performance varies across regions. The Metro Manila area shows the best performance while the economically depressed areas of the Philippines, like Eastern Visayas, Cagayan Valley and Northern Mindanao, trail way behind.

There are, of course, non-academic outcomes of elementary education that could not be measured objectively on a nationwide basis. For these, one would rely on teacher's report on pupils' progress in terms of health habits, desirable attitudes towards work, work skills, emotional maturity, etc. However, the problem is, there is no acceptable method of standardizing a teacher's evaluation.

To solve the problems identified by the SOUTELE report and to implement its recommendations, many reforms in elementary education are being instituted and many more are being planned.

SECONDARY EDUCATION

Secondary education continues the unifying function of elementary education of providing general education. Accordingly, "it shall:

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1. *Sharing in Development: A Programme of Employment, Equity and Growth for the Philippines*, ILO, 1974, P 315.

(a) seek to discover the varying abilities, interests and aptitudes of the youth, and offer courses in the different fields of productive endeavour according to the talents of the youths and in the light of community needs;
(b) cultivate vocational efficiency which will help the students become effective members of their family and the community; and
(c) offer courses to prepare students for effective study in the institutions of higher learning."

Efforts to achieve the objectives of secondary education are demonstrated in the various reform programmes and pilot projects undertaken. To prepare high school students for employment opportunities, the 2-2 Plan (Fig. 3.2) was instituted allowing students to pursue an intensively vocational course. However, data reveal that 83 per cent of the graduates of the vocational stream of the 2-2 Plan proceed to college. One could say, therefore, that secondary education is more successful in preparing students for higher education, than for employment opportunities.

In 1973, Department Order No. 20 was issued prescribing a common curriculum for all regular secondary schools. The following are its features:

(a) The curriculum is for 4 years for all high schools.
(b) Practical arts are required for all years.
(c) The subjects in the curriculum are expressed in broad field areas instead of specific objectives. Correspondingly, secondary course unit is defined.
(d) The curriculum does not specify the inclusion of character education, thus allowing for possible electives to meet special needs of some high schools.
(e) Class periods are an hour instead of 40 minutes.

While there is a common curriculum, specialized programmes on trade and industrial arts, fishery and agriculture are still encouraged to meet the training needs of some students especially those who do not intend or do not have a chance to pursue higher education. A pilot project that puts emphasis on occupational training in agriculture is going on in Barrio Development High Schools in Masaya, Bay, Laguna. The success of this programme will determine whether it will be replicated on a nationwide scale. The evaluation of the project has shown that:

(a) It reduced juvenile delinquency and disciplinary problems.
(b) It allowed for wise use of idle time of out-of-school youths.
(c) It enhanced the involvement of parents, community leaders and other citizens in educational projects.
(d) It developed agricultural skills, thus enabling students to earn while in school.

Documentation of the performance of secondary education has not been done in a way similar to SOUTELE (for elementary education) or the State Higher Education Study and the Private Higher Education Study (for higher education). Aware of this, the Bureau of Secondary Education in cooperation with the Fund for Assistance to Private Education launched in 1978 the Study of Secondary Education in the Philippines (SSEP). The objective of SSEP is to identify the strengths and weaknesses of secondary education and correspondingly assess its effectiveness. Performance indicators will be devised to measure the external and internal efficiency of the secondary schools. It is expected that SSEP will provide a more succinct definition and articulation of programmes and projects necessary for secondary education to effectively perform its role in the development of the country.

3.2.3 ENROLMENT GROWTH IN ELEMENTARY AND SECONDARY EDUCATION

In 1969-1970, enrolment of the elementary level was 6.85 million, increasing to 7.107 million in 1972-1973, and 7.53 million in 1975. It is projected that this will further increase to 7.925 million in 1978-1979, 8.263 million in 1982-1983 and 9.158 million in 1987-1988. The annual growth rate will somehow stabilize from 2.49 per cent in 1975 to a little over 1 per cent in 1981-82 until 1982-1983. Correspondingly, the participation rate will also stabilize at 98 per cent in 1982-1987. Earlier in 1964-1965, the participation rate reached as high as 108.6 per cent. The reason for this was the huge number of over-age children in the elementary.

Enrolment growth has been greater in secondary education than in elementary: from 1.496 million in 1969-1970 to 1.808 million in

1972-1973 and 2.056 million in 1974-1975, or a growth rate of 8.36 per cent in 1971 and 9.83 per cent in 1975. It is projected to further rise to 2.482 million in 1978-1979, 2.861 million in 1982-1983 and 3.339 million in 1987-1988. The highest growth rate in secondary enrolment was in 1974-1975 at 9.83 per cent; but it is projected to decline to 5.04 per cent in 1979-1980 and 3.02 per cent in 1982-1983. On the other hand, participation rates show an upward trend from 35.4 per cent in 1964-1965 to 60 per cent in 1982-1983. (For details, see Table 3.1).

As to the share of enrolment between public and private schools, public elementary schools accounted for 96 per cent in 1969-1970 and decreased to 90 per cent at present. At the secondary level, the public sector's share increased from 36 per cent in 1969-1970 to 40 per cent.

3.2.4 TRENDS OF EDUCATIONAL FLOWS AND WASTAGE IN ELEMENTARY AND SECONDARY EDUCATION

Trends of educational flows from one grade to another could be gauged by analyzing enrolment on each grade level. Three periods were considered: 1956-1957, 1961-1962, and 1965-1966. The enrolment for the succeeding years until fourth year high school was also determined.

Analyzing Table 3.2 (as shown in column 2, 4 and 6) one would notice that of 100 pupils who entered grade I in 1956-1957, only 44.7 reached grade VI and 21.96 reached fourth year high school. The survival rate though is improving, for in the succeeding periods the survival rate in Grade VI improved to 56.57 per cent for pupils who entered Grade I in 1961-1962 and 58.67 per cent in 1965-1966. In the fourth grade, the ratio also improved to 73.43 per cent and 74.37 per cent for pupils who entered Grade I in 1961-1962 and 1965-1966 respectively. Even then, the low survival rate may still be below expectation considering the objective of providing functional literacy and general education during the first two levels of schooling.

What is bothersome is the high dropout rate after Grade I, Grade IV, Grade VI, and first year high school. In columns 1, 3, and 5 of Table 3.2, it should be noted that after Grade I only 81.47 per cent enrolled in Grade II for 1956-1957 pupils, 85.5 per cent for 1961-1962, and 84.54 per cent for 1965-1966. For some reasons, 18.53

per cent did not continue in Grade II for 1956-1957 pupils, 14.5 per cent for 1961-1962, and 15.46 per cent for 1965-1966. After Grade IV, only 76.25 per cent enrolled in Grade V for 1956-1957 pupils, 84.83 per cent for 1961-1962, and 89.02 per cent for 1965-1966. Of the Grade VI pupils, only 73.5 per cent continued to high school for 1956-1957 pupils, 71.75 per cent for 1961-1962 and 71.41 per cent for 1965-1966. However, once the pupils reach Grade V and third year high school, only a small percentage discontinue in the succeeding year.

In the absence of empirical data to explain this high drop-out rate, one could just speculate. It may be due to economic problems or maladjustments to an academic environment especially at Grade I or in first year high school. In the Philippine context, it is quite usual for parents to pool resources to enable a child to attend school and finish grade school or high school. What looms as a more serious problem is the high drop-out rate during the first four years of formal schooling. Efforts to minimize drop-out at this nascent stage of a child's educational development must be worked out.

3.2.5 REGIONAL EDUCATIONAL DEVELOPMENT OF THE PHILIPPINES

In terms of educational development, the Philippines seems to deviate from Harbison and Myer's[1] thesis that countries with high educational development have correspondingly high economic growth. On the whole, the Philippines could be ranked among the most highly developed countries in terms of enrolment in all levels of education. But if economic development is measured in terms of real per capita income and contribution of industry and the manufacturing sectors to gross national product, then the Philippines falls way below the developed countries.

While this is true as the national educational profile of the Philippines, there are some variations of educational development across regions, which this section explores. Four variables are used to gauge the educational development of the regions: (1) scores in the National College Entrance Examination (NCEE) in 1973, (2) regional performance in the Survey of Outcome of Elementary Education

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[1] *Education, Manpower and Growth: Strategies for Human Resource Development* (New York: McGraw Hill Inc., 1964).

(SOUTELE), (3) literacy rate across regions, and (4) family income distribution, 1975.

3.2.5.1. PERFORMANCE IN NCEE

The NCEE variables used for evaluating performance are: (a) the percentage of failure, and (b) the mean score in General Scholastic Aptitude (GSA). The 1973 national GSA mean was 480.68: regions that scored above this were Metro Manila with 526.4 followed by Central Visayas (488.94) and Bicol Region (480.70); those which fell below were Ilocos and Mt. Province (480.54), Southern Luzon and Tagalog Islands (478.46), Southern Mindanao (471.05), Western Visayas (470.76), Central Luzon (470.30), Cagayan Valley and Batanes (465.93), Northern Mindanao (463.21), and lowest Eastern Visayas (460.56). The percentage of failing follows the GSA performance pattern except for Ilocos Region and Mt. Province which had higher GSA scores but had lower percentages of passing students than Southern Luzon and Tagalog Islands. On the other hand, Southern Luzon and Tagalog Islands had a lower GSA mean but had a higher passing percentage.

In terms of ranking in both percentage of failure and GSA mean score, Metro Manila had the lowest percentage of failure and the highest GSA mean score. Central Visayas and Bicol Region ranked second and third respectively. Southern Luzon and Tagalog Islands ranked fourth in the lowest percentage of failure but fifth in GSA mean score. On the other hand, Ilocos and Mt. Province ranked fourth in GSA mean score and fifth in percentage of failure. Southern and Western Mindanao, Western Visayas, Central Luzon, Cagayan Valley and Batanes, Northern Mindanao and Eastern Visayas ranked sixth, seventh, eighth, ninth, tenth, and eleventh respectively. (For details, see Table 3.3)

3.2.5.2 SOUTELE

Using the SOUTELE performance in evaluating educational development, one observes that Metro Manila ranked first in English and Filipino communication skills and science skills. Southern Luzon provinces ranked second in Science and Filipino, third in English. On the other hand, Ilocos and Mt. Province ranked second in English, third in Science but fifth in Filipino. Central Luzon ranked third in Filipino. Central Visayas made a remarkable showing, ranking fourth in both English and Science. However, it ranked a poor tenth in

Filipino. As expected, the predominantly Tagalog-speaking regions (Metro Manila, Southern Tagalog and Central Luzon) showed an outstanding performance in Filipino. The regions which showed a poor overall performance are Cagayan Valley and Batanes, Southern Mindanao, Northern Mindanao and Eastern Visayas.

3.2.5.3 LITERACY ACROSS REGIONS

In literacy rate (as an indicator of educational development) Metro Manila ranked first in both the NCEE and SOUTELE. Southern Luzon and Tagalog Islands ranked second. Incidentally, Southern Luzon performed well in SOUTELE, but not in the NCEE. Central Luzon, which ranked eighth in NCEE but performed well in SOUTELE, ranked third. Ilocos and Mt. Province ranked fourth, which roughly was its rank in NCEE. Bicol Region, which fared well in NCEE but not in SOUTELE, occupied the fifth rank. The other regions in rank order are Northern Mindanao, Western Visayas, Southern and Western Mindanao, Central Visayas, Cagayan Valley and Batanes and, just like its performance in NCEE and NCTELE, at the bottom is Eastern Visayas. (For details, see Table 3.3.)

3.2.5.4 FAMILY INCOME

Average family income across regions is presented to indicate a level of economic development. What can be discerned from family income data is that the region with the highest income excels in all indicators of educational development. On the other hand, the lowest in rank in all educational indicators turned out to be second to the bottom in terms of average family income. What is surprising is the performance in NCEE and SOUTELE of Central Luzon, which is the third most affluent region in the country. Although it ranked third in literacy, it is eighth in NCEE and did not perform well in SOUTELE, especially in English communication skills. And so with Southern and Western Mindanao, which ranked fourth in family income but sixth in NCEE, poor in SOUTELE and eighth in literacy. Ilocos and Mt. Province have been consistent, ranking fifth in family income and almost on the same level in NCEE, SOUTELE, and literacy.

3.2.6 EDUCATIONAL STRUCTURE OF THE PHILIPPINES

Schooling in the Philippines starts at age 7. Elementary schooling, which is free as provided in the Constitution, is divided into four years of primary and two years of intermediate grades. In the primary grades instruction is in both Filipino and either in the vernacular or the language in the region; then in intermediate grades, English is introduced. Generally, the duration of elementary school is six years but there are some private schools which have pre-school departments for those aged 4-6 and also offer Grade VII.

Secondary education is for four years. The curriculum has some common features with provisions for vocational/agricultural/technical components. Both English and Filipino are used as the language of instruction. High school students who plan to pursue a four-year collegiate programme are required by law to pass the NCEE. While the cut-off score to date is the 30th percentile, it does not assure enrolment in the chosen college. Some institutions require that entering students pass their own admission tests in addition to the NCEE. For example, the University of the Philippines requires a satisfactory score in their UP College Admission Test (UPCAT). The UPCAT cut-off score varies with the qualifications and overall calibre of examinees in any given year. And within UP, various departments or academic units have cut-off scores of their own in order to select students who meet the academic requirements and the peculiar nature of their units.

In the private higher education sector, there is the College Scholastic Aptitude Test (CSAT) that is being administered by the Fund for Assistance to Private Education (FAPE). On a voluntary basis, some educational institutions use the CSAT as a supplementary test to further identify students who would be able to benefit most by the type of education being offered in a particular college.

Students in a number of public and private schools that are affiliated with the FAPE Testing Project also take other tests, which allows proper guidance along certain career and curricular programmes. The Diagnostic Test (DT) measures a student's strengths and weaknesses at the junior level in high school, thus, intensive academic remedial programmes can be instituted before the senior year. The Philippine Aptitude Classification test (PACT) allows for further streaming of seniors in accordance with their aptitude and inclinations.

Collegiate programmes are usually taken in four years except for some courses like engineering that last five years. Law and medicine require a preparatory bachelor's degree. For law, it is generally a bachelor of arts degree in the social sciences while for medicine it is a science degree, preferably in a natural science field.

Besides the collegiate programme, there are a number of post-secondary, non-collegiate programmes offered by both state and private colleges and universities as well as technical schools or institutes.

Figures 3.1 and 3.2 graphically show the educational structure described here.

3.2.7 ORGANIZATIONAL STRUCTURE OF THE MINISTRY OF EDUCATION AND CULTURE

Before the implementation of the Integrated Reorganization Plan (IRP), the Ministry of Education and Culture (then called the Department of Education and Culture) had three bureaus which exercised control and supervision over all educational institutions, except chartered state colleges and universities like the University of the Philippines and the Mindanao State University. These bureaus were the Bureau of Public Schools, Bureau of Vocational Education, and the Bureau of Private Schools. The Bureau of Public Schools supervised all public elementary and secondary schools, while the Bureau of Vocational Education supervised government-owned and operated vocational and technical schools at all levels. On the other hand, private educational institutions at all levels were under the supervision of the Bureau of Private Schools.

The chartered state colleges and universities have their own governing board called either a Board of Regents or Board of Trustees and are somewhat autonomous, except for the fact that the Minister of Education and Culture is the ex-officio chairman of the governing board.

As per Presidential Decree No. 1 (1972), and in conformity with the IRP, the Ministry of Education and Culture (MEC) was revamped. The MEC now consists of three bureaus performing staff functions for the Minister, an office of Planning Services, and the various regional directors with line authority over all levels of education in their respective regions. The three bureaus are the Bureau of Elementary Education, Bureau of Secondary Education, and the Bureau of Higher Education. Each MEC regional office is headed by a Director who has staff in charge of higher education— secondary and elementary— both public and private.

The rationale for such a reorganization is to provide continuity and professionalism in the administration of educational services, decentralization through restructuring, and better coordination among the various sectors of education. Note that under the old structure, all three bureaus had regional offices exercising control over and supervision of the various levels of education. Under the new arrangement, the regional directors have line functions exercising control over all levels of education, while the Directors of the Bureaus of Elementary, Secondary, and Higher Education perform staff functions for the Minister of Education and Culture. (For details, see Figure 3.3)

3.2.8 DEVELOPMENT OF HIGHER EDUCATION

3.2.8.1 The Role Played by the Public Sector in the Historical Development of Higher Education in the Country

State higher education was introduced by the Americans in the early 1900s. As an instrument of a sovereign power, it was utilized to bring about a thorough socio-cultural, economic and political reorientation of a society which was then heavily influenced by the long colonial rule of the Spaniards.

With the American occupation, the concept of a universal basic education was also introduced, which aimed to

> develop the Philippines into a democracy in which the Filipinos shall govern themselves; to establish a common language, English, as a unifying factor for political stability; to promote the dignity of labour; and to stress citizenship rule so that individuals could take rightful place in society.

As part of the need to resocialize Philippine society, state higher education institutions were established. Teachers were retrained using a new medium to implement the basic attitudinal and social objectives of basic education. Students were socialized in the value of the "working man." Gradually, education (both as an objective of basic and higher education) was utilized to dismantle the elitist social structure perpetrated by the Spanish rule. Moreover, the masses conceived education as a vehicle to achieve equality in life, greater opportunity and social mobility.

On April 7, 1900, the Philippine Commission created the Department of Public Instruction, subsequently establishing The Philippine Normal School (now Philippine Normal College or PNC) and the Philippine School for Arts and Trades (now Technological University of the Philippines). These institutions were intended to supply needed elementary and industrial arts teachers for the public school system. In 1904, the Manila Business School (later renamed Philippine College of Commerce and now Polytechnic University of the Philippines) was established to train Filipinos in the affairs of government.

As the Americans' foothold in the country stabilized, other regional schools were established. In 1907, the Central Luzon Agricultural School (now Central Luzon State University or CLSU) was established as a public farm school to train people in "modern" agriculture. In 1917, two regional teacher training institutions were organized: the Ilocos Norte Normal School for Northern Luzon and the Cebu Normal School for Visayas and Mindanao. Six other teacher training schools were subsequently established on a regional basis, with curricula closely patterned after that of the PNC in Manila.

On June 18, 1908, the Philippine Assembly created the University of Philippines, whose role was to be the highest seat of learning. It was called upon to set the highest standards in the most important professions. It was to be the mother of the Philippine minds and the great laboratory for the study of the grave social problems which were the preoccupations of that time. It was to produce men of character and wisdom—trained in the arts and sciences who were to assume leadership in those political and social activities which were vital to the state.

When the Philippines gained independence in 1946, there was only one state university. Later, the system of public higher education expanded to 8 universities and 34 chartered state colleges. The expansion had been brought about largely by the conversion of non-chartered colleges (under the then Department of Education and Culture) into chartered institutions through legislation. In addition, there are at present 48 non-chartered public higher education institutions; 17 vocational/technical, 23 agricultural and 8 affiliated with fisheries.

3.2.8.2 Development of Higher Education in the Private Sector

The Spanish regime had introduced higher education in the Philippines which, during the American occupation, branched out into private and public sectors of higher education. In both cases, higher education was closely interlinked with colonial aims.

Using Spanish which was the language of the elite, higher education during the Spanish regime was used for the hispanization of the elite class, the subjection of the Filipinos to the Spaniards and the Christianization of the Filipinos. Through the University of Santo Tomas (founded in 1611) higher education was organized even before a nationwide elementary and secondary school system was established—an accomplishment not realized until 1863. It was a system characterized by elitism, church control, and culture orientation.

During the American occupation, higher education was used as an instrument of democratization with stress on self-government. It propagated the English language as a unifying factor in an amalgam of cultures and languages. It stressed the dignity of labour and the development of a mass-based education for an enlightened citizenry needed for democracy. In a nutshell, higher education during the American occupation was a complete discontinuation of higher education during the Spanish regime. By then, "democracy replaced Christianity, pragmatism replaced scholasticism, citizen-oriented education replaced culture-oriented education, English replaced Spanish as medium of instruction, and mass education replaced elite education."

During the American occupation, higher education served as an avenue for social mobility by contributing needed teachers and clerks. Thus, it spearheaded the formation of a new middle class and eventually shifted Philippine society from a closed to an open society.

The creation of the University of the Philippines in 1908 marked the beginning of a dual system, consisting of a public sector and a private sector of higher education. The UP and other state colleges and universities constituted the state higher education sector, and the private education sector was comprised of the private colleges and universities.

As defined by law, a private school includes any private institution for teaching, managed by private individuals or corporations, and offering courses at any level which confers diplomas or titles and degrees. In 1906, by virtue of Act No. 1459, all private schools had to be incorporated either as stock or non-stock corporations. In educational stock corporations, stockholders are allowed by Corporation

Law to derive some returns on their investments as declared by the Board of Trustees. In educational non-stock corporations, any operating surplus is rechannelled into the improvement of the educational institution. Meanwhile, Republic Act No. 6055 made possible the voluntary conversion of education stock corporations into foundations. Educational foundations exist in perpetuity; if dissolved, all assets go to the state. Foundations are tax-exempt and their net operating surplus is rechannelled into the educational activities of theeducational institution.

3.2.9 THE ORGANIZATIONAL STRUCTURE: TYPES OF GOVERNANCE OF STATE INSTITUTIONS

3.2.9.1 State Colleges and Universities

These institutions, governed by a charter enacted by the legislative branch of the government, are accountable to the Congress of the Philippines. After 1972, charters were promulgated by the President through Presidential Decrees. By and large, chartered institutions like the University of the Philippines and the Mindanao State University have similar structures. The charter guarantees a wide sphere of autonomy in terms of curricular and academic standards, appointment and compensation of faculty, and the determination of priorities for the institution. Funding support from the national government goes directly to the institution. The board of regents or trustees, the highest policy-making body within each university, is fully accountable for administration and operation.

The ex-officio Chairman of the board of regents (or trustees to some institutions) of 8 state universities and 34 chartered colleges is the Minister of Education and Culture. The board appoints the president and other officers of each institution. Due to the nature of the charter, these institutions operate independent of the Ministry of Education and Culture, especially as regards the determination of both academic and non-academic programmes.

3.2.9.2 Non-Chartered Institutions

These institutions operate as an integral part of the Ministry of Education and Culture and are presently under the control and supervision of the Regional Directors. The history of these institutions could be traced to the "specialized schools" of the Bureau of Public Instruction (later Bureau of Public Schools) which took care of teacher training, vocational arts and trades, and agricultural programmes. When the Bureau of Vocational Education was organized in 1955, these schools were transferred to its supervision, except for the teacher training schools which remained under the Bureau of Public Schools.

Such was the structure until 1972 when the whole administrative organization was restructured. Due to the absence of a charter, they lack autonomy. All aspects of management and operation of these institutions are supervised and controlled by the Regional Directors. These operational aspects include the determination of academic programmes, appointment of faculty, and budget formulation and implementation. All funding support to these institutions falls under the higher education programme budget of the Ministry of Education and Culture. And, unlike the chartered institutions, the income generated by these institutions through tuition and other school operations reverts to the national treasury as part of government revenues.

3.2.10 THE ORGANIZATIONAL STRUCTURE: DIFFERENT TYPES OF PRIVATE CONTROL

Private education consists of three types: stock corporations, non-sectarian; non-stock corporations, sectarian; and foundations.

At the outbreak of the war in 1941, there were 8 universities and 84 colleges in the private sector; there was 1 state university and 13 colleges which comprised the public sector.

In 1969, there were 594 institutions of higher education in the private sector, of which 36 had university status and 558 were colleges. Of these, 182 or 30.6 per cent were affiliated with the Catholic Educational Association of the Philippines (CEAP) and were, for all purposes, educational non-stock corporations, sectarian; 53 or 8.9 per cent were affiliated with the Philippine Association of Colleges and Universities (PACU) which were mostly educational stock corporations, non-sectarian; 22 or 3.7 per cent were affiliated with the Association of Christian Schools and Colleges (ACSC). The other 337 educational institutions were either affiliated with the Philippine Association of Private Schools, Colleges and Universities (PAPSCU) or the Philippine Association of Private Technical Institutions (PAPTI). A few did not have any associational affiliation. (For details, see Table 3 4.) In contrast, state higher education in 1969 consisted of 32 state colleges and universities, and 5 colleges under the Bureau of Public Schools.

Of the 594 institutions of higher education in the private sector in 1969, 293 were educational stock corporations, 254 non-stock corporations and 47 foundations.

In 1977, there were 645 institutions in the private sector of higher education, of which 393 were non-sectarian (mostly educational stock corporation) and 252 were sectarian (composed of non-stock corporations).

Control of private higher education is exercised by a Board of Trustees or its equivalent, the members of which are elected or appointed by the stockholders or members, or in some cases such as in sectarian institutions, by the bishop of the congregation or superior of the order. The exercise of the corporate ownership of the educational institution in the private sector has to be in accordance with the Corporation Law. The scope and procedures of governance are often defined in the articles of incorporation and by-laws as submitted to and approved by the Securities and Exchange Commission. Only slight variations in such articles and by-laws exist between educational stock and non-stock corporations. The board has four main responsibilities: *general policies* such as institutional aims and objectives, development plans, affiliations, evaluation of management, and academic or institutional audit; *general management* such as approval of yearly budget, indebtedness, investments and the purchase, mortgaging or selling of property, the auditing and total review of the institution, appointment of officers in the educational institution; *approval* of new courses or discontinuance of existing ones; and the *ceremonial functions* like the conferment of degrees and titles.

3.2.11 ENROLMENT DISTRIBUTION AND GROWTH RATE

3.2.11.1 General Trends

Generally speaking, the enrolment share of the private higher education sector has been consistently greater than the state colleges and universities. In 1945-46, 94.10 per cent of the total enrolment was in private sector; only 5.9 per cent was in the public sector. In SY 1949-50 the private higher education's share in enrolment was 91.5

per cent compared to the public sector's 8.5 per cent. In 1966-67, private collegiate enrolment was still higher (90.9%) than the public (9.1%). The trend continued through 1971-72, with 91.33 per cent enrolled in the private schools and 8.67 per cent were in the state schools. After 1972, the state higher education's share increased to 15.72 per cent in 1972-73 and climbed as high as 20.09 per cent in 1974-75. As of 1974-75, private higher education accounted for only 79.91 per cent.

Average enrolment growth rates, before and after martial law (1972) was declared, varied. In 1946-1950, the percentage of increase in the state colleges and universities was higher than in the private education sector. The enrolment growth rate in 1946-1950 in the private sector was 36.35 per cent compared to 45.99 per cent in the public sector. However, between 1955 and 1960, private enrolment increased by 9.53 per cent while public enrolment increased by 5.9 per cent only. This growth pattern continued until 1970. Thereafter (until 1975) in the private sector it was 2.05 per cent compared to the state education sector's 33.03 per cent.

It is also significant to note that the trend of enrolment in the 1970s has greatly changed, especially in the public sector where annual growth rate has been growing faster than in the private sector. For example, in 1971-72 enrolment in state higher education increased 7.57 per cent compared to the private sector's 3.02 per cent. In 1972-73, the state colleges and universities growth rate registered 127.73 per cent compared to the private's 15.93 per cent. In the school year 1973–74, following the imposition of martial law in 1972, the enrolment growth rate in public sector decreased to 11.52 per cent and in the private education sector to 8.31 per cent. The decline in the growth rate of the private sector worsened in 1974–75 to 18.72 per cent; however, the public sector experienced a 6.36 per cent increase. The enrolment figures in 1975–76 provide greater hope for the private sector; there was a reverse in growth from a decline the previous year to a 33.19 per cent increase; the public sector maintained its growth rate at 18.91 per cent.

3.2.11.2 REGIONAL TRENDS OF ENROLMENT

An overall analysis of the enrolment figures across regions reveals that most (49.89%) of the college students are enrolled in the Metro Manila region; the rest (50.10%) are scattered throughout the rest of the Philippines. (*The Philippine VAI Atlas* 1975: 257). The

Philippine VAI Atlas shows that as of 1972-73, 37 per cent of the total enrolees were in Manila, 13 per cent in Southern Luzon, 10 per cent each in Western and Central Visayas. Very few were enrolled in Cagayan Valley, Eastern Visayas (1% each) and Northern Mindanao (4%). (See Table 3.4.) This trend could be due to: (a) the concentration of higher education institutions in Manila; (b) the socio-economic condition prevailing in various regions which may or may not be favourable to schooling; and (c) the attitude of the college-age population towards studying in places where there are at the same time some work opportunities as in Manila.

In 7 of the 11 regional groupings in the country, the private sector recorded higher enrolment growth rates. From 1965-1966 to 1970-71 the private sector registered a 4.6 per cent average growth rate compared to the public sector's 2.78 per cent. Private enrolment growth rates during said school years were high in the Ilocos and Mt. Province (10.2%), Cagayan Valley (7.6%), and Southern Luzon (7.0%). In the other regions: Eastern Visayas had a decline of 0.4 per cent, Northern Mindanao declined by 4.5 per cent. The growth rate in the Bicol region was only 1.44 per cent.

Public colleges and universities had comparatively higher growth rates than the private higher institutions in Northern Mindanao (6.75%), Manila (5.5%), and Bicol Region (1.7%). In other regions they showed lower, even negative, enrolment growth rates. Between 1965 and 1971, public enrolment decreased in Central Luzon (−2.5%), Western Visayas (−2.6%) and Central Visayas (−2.2%); private enrolment decreased in Eastern Visayas (−0.4%) and Northern Mindanao (−4.5%).

It is also interesting to observe that in later years, enrolment in the public sector across regions has been gaining momentum. As of 1971-73, the public sector had higher enrolment growth rate than the private sector, except in Southern Luzon and in Central Visayas which showed a decline of 4.5 per cent. Private enrolment growth rate in 1971-1973 decreased in five regions: Bicol Region (−9.05%), Eastern Visayas (−8%), Northern Mindanao (−4.5%), Southern Mindanao (−4%) and Cagayan Valley (−2%). In the same period, public growth rate increased significantly.

The Philippine Atlas also shows that despite the concentration of students in Manila and the greater share of the private sector in the total enrolment, the private sector's growth rate in Manila was much lower (1.8%) compared to the public sector (5.5%) in 1965-1971. In

1971-73, private college enrolment in Manila increased only by 1 per cent while that of the public increased by 3.35 per cent.

3.2.11.3 Enrolment Trends by Field of Specialization

Except in agriculture, the private higher educational institutions have a greater share of the enrolment in all fields of study and in all years under study. In 1970-71, 66.72 per cent of the male students enrolled in agriculture were in the state schools; only 33.28 per cent were in the private schools. In 1971-72 the share of the public sector was still higher (67.38%) than the private sector (32.62%).

Although the public sector's share in the total enrolment in agriculture was higher than the private share, the latter's annual enrolment growth rate in this field has been increasing while the state sector's has been decreasing. Between 1967-68 and 1971-72, the private sector's average growth rate was 4.64 per cent compared to the public sector's –0.90 per cent. The highest growth rate in the private sector was in 1971-72 at 21.2 per cent; the public sector's enrolment then decreased to –4.5 per cent.

In 1967-68, enrolment in private education was concentrated on teacher training (35.4%), business and commerce (25.8%), and liberal arts (17.1%). (For details, see Table 3.11.) In the following school year, a declining trend in teacher training was noticed. By 1971-72, teacher training accounted for only 14 per cent, whereas commerce accounted for 40.7 per cent and liberal arts, 20.3 per cent.

The average annual enrolment growth rate of each sector differs in degree. Enrolment in teacher training courses decreased by an average of 14.34 per cent and 1.96 per cent in the private and public sector respectively from 1967 to 1972. In the private sector, for the same period, enrolment increased rapidly in music and fine arts (51.28%), engineering (15.28%), commerce and business (14.5%), medical science (8.46%), physical and natural sciences (7.92%), food and nutrition (7.3%), and liberal arts (9.44%). On the other hand, average enrolment growth rate in the public sector was high in commerce (14.06%), physical and natural sciences (13.44%), liberal arts (17.36%), engineering and technology (9.15%), and music and fine arts (6.26%). The data also show that enrolment in teacher training decreased at a higher rate in the private sector (–14.34%) than in the public sector (–1.96%). In state colleges, enrolment in law and foreign service, medical sciences and food and nutrition decreased by 5.07 per cent and 1.36 per cent respectively.

3.2.11.4 ENROLMENT TRENDS BY FIELD OF STUDY AND BY SEX

Sex distribution varies with the field of study. In 1970-71, there were more female students (55.52%) enrolled in higher education; however, in 1971-72, there were more male students (59.59%). There has been little difference in male-female distribution between state and private higher education. In 1970-71, 54.04 per cent students in state colleges and 55.69 per cent in private colleges were women. For 1971-72, the ratio was reversed with a significantly larger proportion of men in state colleges and universities (67.66%) than in private higher education (57.66%).

The male-dominated courses in 1970-71 and 1971-72 were: agriculture (78.03% and 76.60% respectively), engineering (93.89% and 92.21%), law and foreign service (86.06% and 86.18%), music and fine arts (78.95% and 75.76%), and nautical sciences (97.56% and 80.98%). As for commerce and business administration, there were more women (56.0%) in 1970-71, but in 1971-72, there were more men (87.41%).

The predominantly female fields of studies in 1970-71 and 1971-72 were food and nutrition (99.25% and 98.93% respectively), liberal arts (58.72% and 60.9%), medical sciences (88.88% and 85.41%), teacher training (77.97% and 57.68%) and chemistry and physical sciences (78.64% and 79.68%).

A sample of 12 private universities (with a combined enrolment of 106,651 students) showed that in 1976-77, 55.10% of the students were women. This indicates that the composition of students in the private sector has not changed since 1970.

The predominance of women can be partly attributed to the type of collegiate courses offered. The female-dominated courses in 1970-71 were: teacher training (77.97%), liberal arts (58.72%), and commerce (56.00%). These were low-cost[1] courses. The 1977 survey (conducted in the 12 universities mentioned earlier) revealed the same trend and, in some instances, the percentage shares even went up: 67.59 per cent of the commerce students and 92.38 per cent of teacher training students were women.

According to some sources, the Philippines ranks among the highest educated countries, just below the United States but above most of Western countries and all of Asia. But this does not imply that the Philippines is an "over-educated" country. There are educational disparities which exist, such as differences in educational participation across regions. Table 3.4 shows that of the total collegiate enrolment in 1972-73, 49.89 per cent were studying in Metro Manila while the rest were distributed thinly over 10 other regions. Enrolment share seems to be particularly low in Cagayan Valley, Eastern Visayas, Bicol region and Northern Mindanao.

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[1] Low cost, i.e. not requiring extensive expenditures on laboratories, equipment and research materials.

As regards enrolment participation in college among different social groups, reference should be made to recent results of the NCEE. The NCEE is designed to screen students who would like to enrol at the collegiate level. An examination of the socio-economic status of those who passed the NCEE gives us an idea of the composition of collegiate enrolment. A study conducted for the Private Higher Education Development Committee concluded that students coming from upper social classes (Parents with high education, high income, high occupational status) have significantly greater chances of passing the NCEE than those from lower social classes. Thus, enrolment at the tertiary level is mostly composed of students from the upper classes.

A 1975 random survey (conducted among 7,602 students enrolled in 12 private universities from eight regions of the Philippines) showed that 27.3 per cent of college students belonged to the upper class, 37.3 per cent to the upper middle class and 24.3 to middle class, 9.1 to lower middle class, and 1.9 to lower class. The basis of classification was a socio-economic status (SES) index incorporating three variables: income, education and occupation of parents.

Collegiate enrolment across types (by control) of private institutions of higher learning cannot be adequately ascertained. To date sufficient enrolment data on this aspect are not available. Only the number of sectarian and non-sectarian private institutions is known. In 1976-77 393, or 60.93 per cent, of the private schools were non-sectarian; the rest were sectarian schools. Ten years earlier, when there were 594 private colleges and universities, there were more non-sectarian schools (65.66%).

The growth of collegiate enrolment varies according to type of collegiate courses. Between 1967-68 and 1971-72, enrolment in commerce grew the fastest at 14.5 per cent in the private sector and 14.06 per cent in the public sector. Enrolment in engineering and technology followed with an annual growth rate of 15.28 per cent in the private sector and 9.15 per cent in the public sector. Enrolment in law grew relatively slower with an average growth of 4.15 per cent in the private sector and a decline of 5.07 per cent in state colleges and universities. Liberal arts showed a modest average growth of 9.44 per cent in the private education sector but a high growth of 17.36 per cent in the public sector. The course which experienced a tremendous decline in enrolment was teacher training: negative average growth of 14.34 per cent from 1967 to 1972 in the private education sector and a negative 1.96 per cent in the state colleges and universities.

3.2.12 FLOW OF SECONDARY LEVEL INTO THE HIGHER LEVEL

Because of the unavailability of exact data regarding the flow of high school graduates to the tertiary level, this section's analysis has been derived from approximations. The proportions were computed by comparing the percentage of total first-year enrolees of a given school year to the total high school graduates of the preceding year.[1]

Data from 1960-61 to 1969-70 show that the flow was somewhat erratic. For instance, from 1961 to 1965, the percentage of first year college students compared to the number of high school graduates the previous year hovered around 90 per cent. This percentage went down drastically to 70 per cent in 1965-66 and further to a record low of 57 per cent in 1966-67. A year later, the percentage went up again beyond the 70 per cent level. For two years thereafter the rates fluctuated between 72 and 78 per cent. For the 10-year period, the average flow can be estimated at about 82.7 per cent.

A similar method was used to get the flow of high school graduates to the private sector. The data were realistic enough since they reinforced the previous conclusion that the enrolment share of the private sector has been much greater than the public sector. From 1961-62 to 1965-66, first-year enrolment figures in private tertiary institutions amounted to a cohort averaging 95.58% of the total high-school graduates.[1] Assuming that all these high school graduates enrolled the following school year after high school graduation, we can infer that 4.4 per cent were registered as first year students in the public sector. In 1961-62 alone, the inflow of high school graduate enrolees to the private sector reached 98.3 per cent, which could mean that the remaining 1.7 per cent went to public colleges and universities. Five years later (1966-67), the flow to the private sector decreased to 92.7 per cent and further declined to 87.8 per cent the following year. On the other hand, the flow to the public tertiary institutions, although smaller percentagewise, had increased to 7.3 per cent in 1966-67 and 12.2 per cent in 1967-68.

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[1] These percentages are slightly over-stated because in some years there are more enrolees than high school graduates, indicating that some portion of first-year enrolees are from a different age-cohort.

Generally, the average flow to the private sector during the seven-year period was 94.1 per cent compared to public sector's 5.9 per cent.

3.2.12.1 PAST TRENDS OF EDUCATIONAL FLOWS FROM ONE CURRICULUM YEAR TO ANOTHER UNTIL GRADUATION

Since no exact data on higher educational flows are available, the figures are estimated by getting the difference of the first-year enrolment in the second year, third year and fourth year of the consecutive school years. It should be noted that these differences are always with respect to first-year enrolment in order to minimize overestimation or underestimation of the flow due to the inclusion of irregular students and of the transferees from the other sector. The figures therefore represent the proportion of first-year enrolees at an initial school year who are able to go to the second, third, fourth years and finally, graduate on time.

The estimates[1] show that the flow of students from the first year to the fourth year decreases as one transfers from one curriculum year to another. The chance of finishing first-year on time and eventually enrolling for the second year is 76.5 per cent but the chance of going on to the third year is lower at 64.6 per cent. Furthermore, the chances of enrolling for the fourth year and eventually graduating that same school year are even lesser at 61.1 and 56.4 per cent respectively. The observed trend then is that the chances of finishing a four-year course on time are almost 60 per cent.

In 1959-60, the chances for first-year freshmen students to move on to the second year was as high as 70.7 per cent but chances of reaching third year went down to 61.1 per cent. Chances of getting on to the fourth year on time figured at 54.6 per cent, and the chance of graduating on time in the same year was slimmer at 51.5 per cent.

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[1] The above computations are limited by the assumption of a regular flow of high school graduates to the tertiary level immediately after graduation. The irregular students or late enrolees, who might not have entered immediately after the year they graduated but enrolled in later years or stopped permanently, were not taken into consideration. This limitation should be noted.

From 1964 to 1965, chances of the incoming first-year students were better. The probability that these students would reach second year stood at 83.3 per cent. The flow from third and finally, to fourth year also increased to 67.6 and 65.5 per cent respectively. Most important, the chance of graduating on time rose to 57.3 per cent.

In 1968-69, the trend in the flow showed a recession. The percentage of first-year students who reached the second year on time decreased to 79 per cent, the chance of reaching the third year went down to 62.6 per cent, and the chance of going to the fourth year declined to 62.1 per cent; chances of graduating during the same year decreased to 43.9 per cent.

3.2.12.2 EDUCATIONAL FLOW IN SELECTED FIELDS OF STUDY

1. *Commerce*

Among commerce students, the trend of flow is continuously downward. The flow of first year to second year is 66.7 per cent, to third year 52.7 per cent, to fourth year 44.9 per cent, and to graduate on time 43.0 per cent. It is implied then that only 43 per cent, on the average, of the first year commerce enrolees graduate on time. This trend is exhibited all throughout the period under consideration.

2. *Liberal arts*

The same trend is exhibited in the liberal arts. Average flow of first year students to second year is 65.1 per cent; to second year 44.8 per cent; to third year 40.32 per cent and to graduate on time 29.6 per cent. Thus, more commerce students finish their studies on time than liberal arts students.

3. *Engineering and technology*

The flow of engineering students per curriculum year gradually diminishes as one approaches the last years of school. Flow of first year to second year is 67.6 per cent, to third year 59.2 per cent, to fourth year 46.8 per cent, to fifth year 38.3 per cent and to graduate on time 31.2 per cent.

Comparatively, commerce students have better chance of finishing their studies on time than both the liberal arts and engineering students.

3.2.13 CORRESPONDENCE OF DIFFERENT FIELDS OF STUDY WITH ABSORPTIVE CAPACITY OF THE LABOUR MARKET

A considerable number of studies has been done on manpower supply and demand in the Philippines; the findings were intended to minimize mismatch between supply of and demand for qualified manpower. Moreover, these studies contribute to greater refinement in planning and manpower forecasting. Foremost of the works on Philippine education and manpower are the following: (a) studies made by the Presidential Commission to Survey Philippine Education (PCSPE); (b) Manpower Projections for the Year 2000 by Mangahas and Quizon as commissioned by the Fund for Assistance to Private Education (FAPE); and (c) a Manpower Development Plan for 1977-82 prepared by the National Manpower and Youth Council (NMYC).

The studies have some similarities, peculiarities, and limitations. They all belong to the "fixed requirement" school, the basic feature of which is "to relate educated manpower needs of various types at any given time to the level of aggregate output and its sectoral compositions." (Jurado, Alonzo and Arcelo, 1977-1978.)[1] In this approach, manpower requirements for the different periods are estimated out of a fixed employment-output coefficient for each sector multiplied by the projected output.

Furthermore, the three studies came up with their own projections each covering a different time span. The PCSPE study, for instance, estimated the requirements and supply for 1969 and 1974 across educational levels and across three major sectors: agriculture, manufacturing and mining. On the other hand, the FAPE study analyzed the labour demand and supply on a long-term span, up to the year 2000. Manpower requirements were also disaggregated by field of study. The NMYC, in contrast, forecast manpower needs by occupational category in a medium-term outlook of five years. Unlike the two other studies, the Manpower Plan of NMYC is not an educational plan although it could have significant implications on educational planning.

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[1] Jurado, Gonzalo M., Ruperto Alonzo and Adriano Arcelo, "Manpower Demand and Supply" in *FAPE Review*, Vol. 8, No. 2, 1977.

3.2.13.1 SOME LIMITATIONS OF THE MANPOWER DEVELOPMENT STUDIES

The three studies were constrained by the fixed requirement approach that was used in the forecasting. The method employed assumes that a constant labour-output coefficient will prevail in all the years and the production given will not change. Except for the NMYC study, technological change is ruled out in the models.

In the PCSPE study, other limitations were: (a) the level of sectoral aggregation was too broad, thus not accounting for "the several subsectors of different education intensities" which could affect the demand projections; (b) projections of manpower supply were based on the total working-age population which seem to "overemphasize the net efficiency in the demand for educated labour" (c) the magnitude of expansion or contraction in a particular course programme is not stated; and (d) inferences culled from the survey were based on relatively young graduates, hence, not representative enough to indicate earnings and employment patterns across degree programmes.

The limitation of the FAPE Year 2000 Study lies in the use of 1965 data regarding the sectoral distribution of the labour force by educational attainment for calculating the employment-output coefficients. This could contribute to the overestimation of manpower shortage by the year 2000.

Lastly, the failure to state the method for estimating the labour productivity growth for various economic sectors limited the Manpower Development Plan.

3.2.13.2 FINDINGS ON THE ABSORPTIVE CAPACITY OF THE LABOUR MARKET

The measurement of the absorptive capacity of the labour market is based on the actual data and the projections or estimations. The PCSPE and the HERC (Higher Education Research Council) studies analyzed actual figures while the FAPE Year 2000 Study made use of its forecast data.

(a) *The PCSPE Findings*

The PCSPE study, in its attempt to measure manpower requirements and supply, used the segment of the population belonging to the 14-65 years old bracket as comprising the total supply, and those employed in that age bracket as the demand. The ratio of those employed over the total manpower would give the utilization rates or the absorptive capacity of the labour market relative to the working-age population.

Table 3.5 shows that in 1969, total manpower available was 19,164,000 but the labour market absorbed only 12,465,000 or 65 per cent of the total labour supply. Analyzing by educational attainment, 1,007,133 were in their last years or graduates of college and only 610,785 or 60.6 per cent of them were utilized. Surprisingly, fourth year high school graduates were absorbed more in the market, with a 78 per cent utilization rate. Those in their third year college were absorbed least at 38.3 per cent.

In 1974, total manpower supply grew by the same rate as the demand. On the whole then, the absorptive capacity of the labour market remained the same except for a 1.2 per cent increase in 1974. A notable change happened to the employment growth rate of the college graduates relative to the others. The number of employed college graduates increased by 15 per cent while the absorptive capacity for these graduates went down to 40.5 per cent or by 20.1 per cent relative to 1969. However, the absorptive capacity for those with less than 4 years of college remained almost the same while those with less than high school increased from 66.8 to 72.0 per cent or a difference of 5.2 per cent. These changes of the utilization rates altogether caused the increase of the absorptive capacity of the total manpower from 65 to 66.2 per cent.

(b) *The HERC Findings*[1]

The HERC study measured the absorptive capacity of the labour market by field of study using not the total manpower available for the labour supply side but the total supply of skilled labour (or college graduates).

In 1963-64, the supply of college-degree holders reached 13,360 but only 80.3 per cent of these were absorbed by the labour market. In 1967-68, the supply of skilled labour increased to 35,220 but only 21,294 or 59.9 per cent of these were absorbed by the labour market since supply increased at a faster rate than demand, overall absorptive capacity decreased.

In 1963-64, commerce and business graduates had a higher utilization rate (96.0%). Coming in second were graduates of teacher training (89.7%) and medical science graduates (81.9%). Engineering graduates were the least absorbed (7.9%).

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[1] *Higher Education in the Philippines (1970-71)*; A study conducted by the Higher Education Research Council (HERC) of the Committee on Education of the Philippines Senate, 1972.

Data for 1967-68 reflect changes in the absorption pattern by field of study. Commerce graduates still remained the most absorbed (98.8%). Graduates with majors in mathematics and statistics ranked second (80%). Graduates of the physical sciences and agriculture also experienced increased utilization rates (62.1% and 65.0% respectively). Meanwhile, the biological science graduates were the least absorbed (14.3%). Engineering graduates, who were the least absorbed in 1963-64 (7.9%) were better absorbed (51.6%). The popularity of medical science and teacher training graduates declined in 1967-68: their labour market absorption rate went down from 81.9 per cent in 1963-64 to 64.8 per cent and from 89.7 per cent in 1963-64 to 51.7 per cent respectively. Law and foreign service also experienced a downward trend as its absorption rate decreased from 50 per cent (in 1963-64) to 29.4 per cent. Overall, the absorption capacity decreased from 80.3 per cent in 1963-64 to 59.9 per cent in 1967-68.

(c) *Manpower Projections by the Year 2000*

Despite its limitations, the FAPE study concluded that to attain the target of the NEDA Plan in 2000, the projected manpower requirements would have to reach 102,610,000. Since labour supply by then would only be 30,042,000, then the efficiency of labour must increase three-folds. Note that the greatest need for efficiency improvement is for those with elementary schooling who must increase their efficiency by more than five times, for those with high school education by more than twice. As for the demand for college graduates, there will still be underutilized college graduates by the year 2000.

3.2.14 DISTRIBUTION AND GROWTH OF PHYSICAL, TEACHING AND FINANCIAL RESOURCES BY SECTOR

3.2.14.1 Ratio of Total Book Collection to Total Enrolement

The book-student ratio indicates the availability and accessibility of reading materials for student use. According to the FAPE survey, private higher institutions have 5.59 books per student whereas the public sector provided only 2.24 books for every student. As of 1972-73, the private sector had a relatively higher book-student ratio than the public sector in five fields of study: music and fine arts (10.5 : 1), teacher training (4 : 1), commerce and business (2.5 : 1), food, nutrition and dietetics (3.5 : 1), medical sciences (2 : 1). In contrast, the public sector could hardly provide half a book for each student in medical sciences (.28 : 1) and commerce (.29 : 1).

The ratio, however, favoured the state higher institutions in the fields of agriculture, engineering and technology (both 3 : 1) and liberal arts and sciences (219 : 1). Sadly, a student enrolled in the private sector hardly had a book in agriculture (.92 : 1).

3.2.14.2 LIBRARY BOOKS AND PERIODICAL COLLECTIONS IN HIGHER EDUCATION INSTITUTIONS

Of the 3,300,134 total library holdings in 1972-73, 90.0 per cent were books, 2 per cent journals, while 8 per cent were other library facilities (mostly home readings, reference materials, microfilms, etc.). Roughly 91.5 per cent of the total library facilities belonged to the private sector, while 8.5 per cent were found in public institutions. Of these, 90.4 per cent were books, 1.5 per cent journals and 8.1 per cent other library facilities. On the other hand, 85.7 per cent of the total library facilities of the public sector were books, 6.9 per cent journals and 7.2 per cent other library facilities. Most of the available library books of both sectors were concentrated in the social sciences (42.2% for the private and 35.1% for the public), humanities (33.2% for the private and 29.1% for the public) and natural sciences (17.6% for the private and 26.2% for the public).

3.2.14.3 GROWTH AND DISTRIBUTION OF LECTURE AND LABORATORY ROOMS

One feature which makes higher education institutions in the Philippines distinct from their Western counterparts is that they offer all three levels of schooling. Thus, there are those which offer professional courses (such as engineering, law, medicine, teacher training, and liberal arts) that also have a high school department and a grade school. The use of the lecture and laboratory rooms, for instance, reflects this phenomenon. There are facilities which are used jointly by the elementary, secondary and college departments.

The data of the sampled institutions show that there are 8,413 classrooms, 87.14 per cent which are in the private education sector. The laboratory rooms account for a total of 2,169 of which 75.20 per cent are in the private education sector.

As to the utilization rate, the Private Higher Education Survey on Physical Facilities concludes that in Metro Manila, classrooms in large schools (enrolment over 15,000) are overutilized to the extent of 114.25 per cent. Medium-sized schools (enrolment: 5,000–10,000) have a utilization rate of 88.25 per cent while small schools (enrolment: less than 1,000) have a utilization rate of 75.08 per cent.

Outside of Metro Manila private schools' classrooms are underutilized, with rates ranging from 47.62 to 58 per cent depending on enrolment size. Smaller schools have lower utilization rates in terms of both classroom spaces and classroom hours.

3.2.14.4 FACULTY RESOURCES

The most common method of measuring faculty as resources is the use of student-faculty ratio. This method assumes that instruction is effective with relatively small-size classes. The Ministry of Education and Culture sets the standard of 40-50 students per class depending on the nature of a class.

Over the years, student-faculty ratio improved from 25 : 1 in 1961-62 to 22 : 1 in 1971-72. This compares well with the set standard of 45 : 1, and quite obviously points to a lack of shortage of college teachers.

Across various curricular programmes, however, the student-faculty ratio ranges from as low as 9 : 2 to as high as 47 : 9. Liberal arts and sciences, law and foreign services and unclassified programmes exhibit lower student-faculty ratio (from 9 : 2 to 17 : 2) while business administration and commerce, engineering and technology, and agriculture show a high ratio (from 45 : 1 to 47 : 9). A detailed comparison is shown in Table 3.7.

The ratios mentioned in Table 3.7 serve as a quantitative indicator. Academic qualifications of faculty serve as an index of quality. The 1973 *FAPE Atlas* Survey indicated that 15,810 college teachers were then working on a full-time basis (18 units or more), and 8,638 on part-time basis. There were, therefore, more full-time teachers than part-time teachers (35%). Among those working full-time, 498 had doctorates, 1,760 had master's degrees, 11,433 had bachelor's degrees and 613 had diploma/certificates. Among the part-time faculty, 431 had doctorates, 1,787 had master's degrees, 6,136 had bachelor's degrees, and 274 had diploma/certificates.

There are more full-time faculty members in the public sector (85.6%) than in the private sector (56.0%). Employment status varies with the fields of specialization. In the private sector, the fields of study where there are more fulltime faculty are liberal arts (61.2%), agriculture (61%), teacher training (56.4%), engineering and technology (56.6%), medical sciences (56.2%), and commerce and business administration (52.8%). In contrast, in the state colleges and universities, the smallest percentage of full-time faculty are in the medical sciences (54.2%) and commerce and business administration (56.1%). In all other fields in the state colleges and universities, the percentage rises above 69 per cent.

3.2.15 PER STUDENT COST

Cost per student per year varies across regions and typology of schools. In state colleges and universities per student cost is higher than in the private education sector. Among the state colleges and universities, per student cost is highest at the University of the Philippines (P 2,267.83 in 1973 and up to P 3,814.31 in 1977). Per student cost in the non-Metro Manila state colleges and universities ranks second (P 331.74 in 1973 and P 1,521.54 in 1977). In comparison, per student cost in state colleges and universities in Metro Manila is surprisingly lower (P 638.09 in 1973 and P 999.04 in 1977). (For details, see Table 3.6.)

Per student cost is lowest in the private schools in non-Metro Manila (P 286.47 in 1973 and P 491.45 in 1977). In the Metro Manila private schools, per student cost is higher (P 428.48 in 1973 and P 611.48 in 1977). Across typology of private schools, the sectarian schools have higher per student cost but way below the cost in UP and in some sectarian institutions, it is comparable with the other state colleges and universities.

3.2.16 STRUCTURE OF REVENUES AND EXPENDITURES

Just as per student cost varies across the typology of educational institutions, revenue sources also vary. Private schools operating on a self-reliant basis are funded mainly by tuition fees. The state colleges and universities, on the other hand, depend on budgetary allocations from the national government. In Metro Manila in 1972, private education derived revenues largely from tuition fees (90.28%) compared to UP's 10.58 per cent and Metro Manila state colleges and universities' 25.61 per cent. The dependence of private education on tuition fees declined to 81.20 per cent in 1977 but the state colleges and universities and UP in Metro Manila have decreased their dependence on tuition fees to only 10.58 per cent and 3.68 per cent respectively.

As to the components of expenditures, the state colleges and universities spend more for salaries and wages than the private education sector. UP has the highest allotment for wages (76.31% in 1972 and 66.87% in 1977); other state colleges and universities show similar higher percentages of expenditures on salaries and wages (79.85% in 1972 and 72.61% in 1977). State colleges and universities outside of Metro Manila spent 69.32 per cent in 1972 and 50.08 per cent in 1977 for salaries and wages. Such levels of expenditures for salaries and wages are higher than in the private education sector (53.91% in 1972 and 52.45% in 1977) for Metro Manila. Non-Metro Manila private schools had almost the same level of expenditure for salaries and wages (54.24% in 1972 and 49.49% in 1977).

3.2.17 SUMMARY COMMENTS ON THE EXPANSION OF PUBLIC AND PRIVATE HIGHER EDUCATION

The enrolment explosion experienced during the decade of the sixties was a reaction to liberal educational policies adopted by the Philippine government in bringing universal education, particularly elementary education, to the greatest number of individuals. Together with other influential social factors, this raised the educational expectations of individuals across all social groups thus creating a high demand for secondary and collegiate education. The task of meeting the demand for secondary education is shared almost equally by both the government and the private sectors. However, at the collegiate level, the demand falls largely on the hands of the private sector with government participation limited to only a few state colleges and universities.

In the attempt to respond to the high demand for college education, there ensued a proliferation of private schools all over the country, particularly in urban centres. Guided by private motives, investors in education opted to establish schools which offered low-cost courses like commerce and liberal arts. As a result of the lower tuition fees in these courses there came about a larger number of schools offering low-cost courses than high cost courses (the sciences).

The expansion of the state higher education institutions has responded to the need to assure access to college-bound population, especially to those who by virtue of their socio-economic status cannot afford to go to private schools. State schools also enable the rural population access to college education since most of the private schools are located in urban centres. Moreover, state institutions shoulder the responsibility of offering high-cost courses (especially in the natural and physical sciences), which for the private institutions are hard to sustain.

Aside from meeting the demand for high-cost courses, state colleges and universities also provide types of manpower deemed vital for national development. This is especially true for programmes in agriculture, fisheries and forestry. State institutions also assume a crucial role in the production of technical level manpower for trade and industry.

While the private sector carries out the teaching function (as reflected in the number of enrolments and graduates) which universities are supposed to perform, most of the research and community services functions are carried out by the state higher education institutions. Public colleges and universities are often given the added task of providing advanced academic training for various types of practitioners like teachers, government managers, employers, and technical personnel. In addition, leadership comes in the form of knowledge generated through research and academic study. One of the newly-adopted roles of state higher education is community leadership. Through extension programmes, organized non-formal/informal training programmes, off-campus experimentation centres, etc., their expertise is harnessed in confronting the problems of their immediate environment.

Of course, there are other factors that influenced the growth of state institutions, albeit "grease-rationale" in nature. There had been pressures emanating from partisan policies, which considered the establishment of state higher educational institutions within their constituency a pillar of achievement. Due to the lack of a national policy on a rationally-integrated system of state higher education, the emergence of these monuments of achievement continued unabated for sometime. Another pressure emanates within institutions insisting on elevation of their institutional status—from a high school to a college or from a college to a university. In operational terms, this implies an increase in faculty status and compensation, expanded operations, and a corresponding increase in budgetary support.

Several steps have been initiated to counteract the declining academic standards and diminishing resources. The Presidential

Commission to Survey Philippine Education (PCSPE) in 1970 and the Presidential Commission to Study State Higher Education (PCS-SHE) in 1975 were charged with the task of examining these problems. A further restructuring of the Ministry of Education and Culture in a regionalized scheme has been undertaken to make higher education responsive to local needs and problems. Several external assistance and educational loan programmes have been extended to strengthen the capabilities of state higher education. These have been carried out through the auspices of the Education Development Projects Implementing Task Force (EDPITAF), International Bank for Reconstruction and Development (IBRD) and the Asian Development Bank (ADB). More notable of these are the support granted to 3 regional agricultural colleges, 9 regional staff development centres for teacher re-training, 20 private and public schools of engineering, and the upgrading of a centre for veterinary medicine, forestry, fisheries and animal science. Support has also been given to a number of schools to enable them to exercise leadership in non-traditional university activities like farm training, training of fishery personnel, textbook development, curriculum development, and community-oriented projects.

Past expansion of the higher educational system, specifically private higher education, was brought about mainly by deliberate efforts to meet private demand for education. Social demand for education, manifested traditionally through manpower requirements, was only an incidental reason. This is reflected in the existing disparity in the annual supply of college graduates and the demand for such graduates in the Philippine labour market. This disparity is not only evident in numerical terms but also in the kind and quality of education demanded by the employers of educated manpower. In effect, a sort of dysfunction becomes discernible between private higher education (or the entire educational system) on the one hand, and the economy on the other.

Because of the significant role of institutions of higher learning in the country's development and progress, both sectors will be facing new challenges in the future. The educational systems have to fulfil new demands, of which the more important ones include: to meet the manpower needs of a rapidly developing economy, to be a source of innovative constructs necessary for dynamic social growth through graduates or through the institutions themselves, and to provide adequate educational opportunities. In the public sector, enrolment will continue to expand. This is mainly due to the government's drive to generate manpower in agriculture, fisheries and forestry and the need for a continuous supply of qualified teachers. Because of the additional roles that the state colleges and universities will assume, the cost of their operations will likewise become higher. However, their programme offerings and locations should be such that their operation would be economically feasible.

On its own, the private sector, which is heavily reliant on family-supported student fees, could not meet the gargantuan tasks of state higher education. It has to pursue active partnership with the government and other non-educational sectors of the Philippine society. It also has to undergo structural changes in conformity with the prevailing conditions and perceived needs.

Table 3.1 *Participation rates (in percentage)*

	1964-1965	*1982-1983**	*1987-1988**
Elementary	108.6	98	98
Secondary	35.4	60	63

*Projected

Table 3.2 *Percentage of Survival from Grade I to Fourth Year in Public and Private Schools, SY 1956-57 to SY 1974-75*

School Year	ELEMENTARY						SECONDARY			
	Grade I	*Grade II*	*Grade III*	*Grade IV*	*Grade V*	*Grade VI*	*1st Yr.*	*2nd Yr.*	*3rd Yr.*	*4th Yr.*
1956-57	943,077									
1957-58		768,358 (81.47%)								
1958-59			723,114 (76.68%)							
1959-60				653,005 (69.24%)						
1960-61					497,908 (52.80%)					
1961-62	1,131,035					421,513 (44.70%)				
1962-63		967,090 (85.50%)					309,809 (32.85%)			
1963-64			914,394 (80.85%)					249,562 (26.46%)		
1964-65				830,482 (73.43%)					219,826 (23.31%)	
1965-66	1,402,320				704,538 (62.29%)					207,081 (21.96%)
1966-67		1,185,591 (84.54%)				639,822 (56.57%)				
1967-68			1,115,174 (79.52%)				459,093 (40.59%)			
1968-69				1,042,891 (74.37%)				394,824 (34.91%)		
1969-70					928,354 (66.20%)				347,708 (30.74%)	
1970-71						822,689 (58.67%)				315,853 (27.93%)
1971-72							587,476 (41.89%)			
1972-73								500,311 (35.68%)		
1973-74									444,555	417,018

Table 3.3 *Levels of Educational Development*

Region	*Rank Based on Various Indicators*								
	NCEE		*SOUTELE*						
	*% of Failure**	*GSA Mean Score*	*English*	*Score in Science*	*Filipino*	*Literacy %*	*Rank*	*Average Family Income*	*Income Rank*
								P.	
1. Metro Manila	1 (526.4)	1	1	1	1	90.8	1	7,785	1
2. Central Visayas	2 (488.94)	2	4	4	10	71.9	9		
3. Bicol	3 (480.70)	3	7	7	4	77.5	5	2,784	8
4. Southern Luzon & Tagalog Islands	4 (478.46)	5	3	2	2	86.1	2	4,332	2
5. Ilocos & Mt. Province	5 (480.54)	4	2	3	5	79.2	4	3,299	5
6. Southern Mindanao & Western Mindanao	6 (471.05)	6	9	10	9	74.1	8	3,577	4
7. Western Visayas	7 (470.76)	7	6	8	8	75.1	7	3,206	6
8. Central Luzon	8 (470.30)	8	8	5	3	83.3	3	4127	3
9. Cagayan Valley & Batanes	9 (465.93)	9	5	6	7	71.3	10	2,390	10
10. Northern Mindanao	10 (463.21)	10	10	9	6	75.4	6	3,052	7
11. Eastern Visayas	11 (460.56)	11	11	11	11	70.0	11	2,548	9

*Rank 1 = Lowest percentage of failure.
11 = Highest percentage of failure.

Table 3.4 *Relative Distribution of Collegiate Enrolment, 1972-1973*

Region	*Per cent share*
Manila	37.0
Ilocos and Mt. Province	5.0
Cagayan Valley	1.0
Central Luzon	8.0
Southern Luzon	13.0
Bicol	3.0
Western Visayas	10.0
Central Visayas	10.0
Eastern Visayas	1.0
Northern Mindanao	4.0
Southern Mindanao	8.0
Rest of the Philippines	50.10
Metro Manila	49.89

Source: FAPE, *The Philippine Atlas 1975*, Vol. 1, p. 257.
Note: Metro Manila includes Manila, Laguna, Batangas, Cavite, Bulacan and Rizal.

Table 3.5 Manpower Utilization by Educational Attainment

Educational Attainment	*1969*			*1974*		
	Total Manpower (Supply)	*Employed (Demand)*	*Utilization (%)*	*Total Manpower (Supply)*	*Employed (Demand)*	*Utilization (%)*
Total Manpower (Population)						
14-65 years old	19,164,000	12,465,000	65.0	21,512,000	14,253,000	66.2
4-5 Years College	1,007,133	610,785	60.6	1,724,214	698,397	40.5
1-3 Years College	1,041004	398,880	38.3	1,187,328	456,096	38.4
4 Years High School	1,038,306	810,225	78.0	1,237.585	926,445	74.8
1-3 Years High School	1,687,583	1,034,595	61.3	2,110,114	1,182,999	56.1
Others	14,389,974	9,610,515	66.8	15,252,759	10,989,063	72.0

Source: Presidential Commission to Survey Philippine Education. Education for National Development—New Patterns, New Directions, December 1970, p. 42.

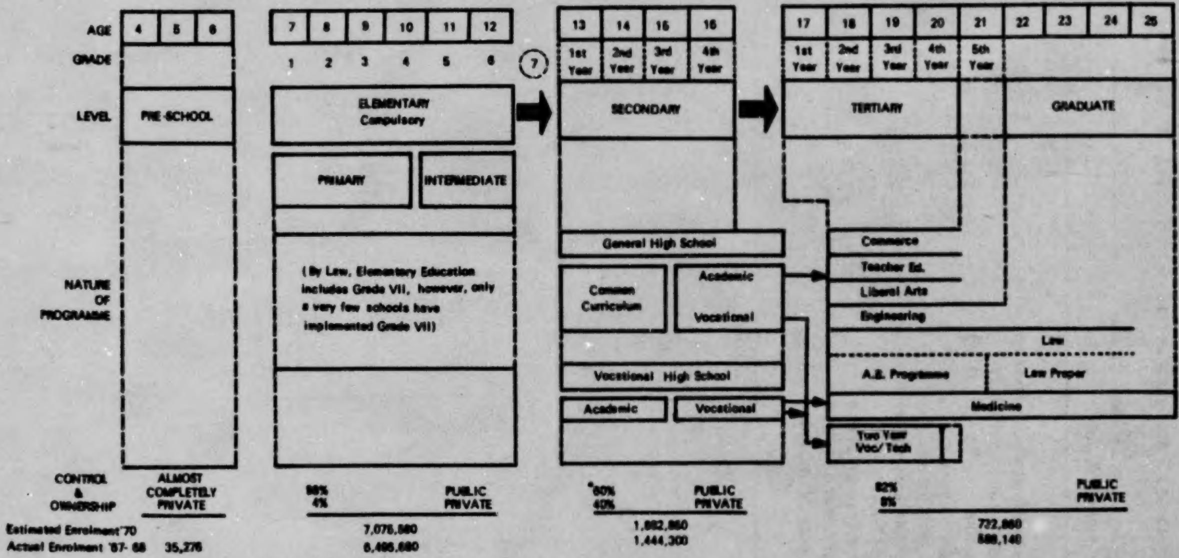
Table 3.6 *Comparison of per Student Cost*

	1973	*1974*	*1975*	*1976*	*1977*
	P.	P.	P.	P	P.
1. Metro Manila					
1.1. Private Education	428.48	460.08	553.71	592.81	611.48
1.2. University of the Philippines	2,267.83	1,810.42	3,539.48	3,668.62	3,814.31
1.3. Metro Manila—State Colleges and Universities	638.09	678.63	988.13	1,047.23	999.04
2. Non-Metro Manila					
2.1. Private Education	286.47	325.70	386.41	452.73	491.45
2.2. Non-Metro Manila—State Colleges & Universities	831.74	979.54	1,267.30	899.18	1,521.54

Table 3.7 *Student-faculty ratio by field of study, 1971-1972*

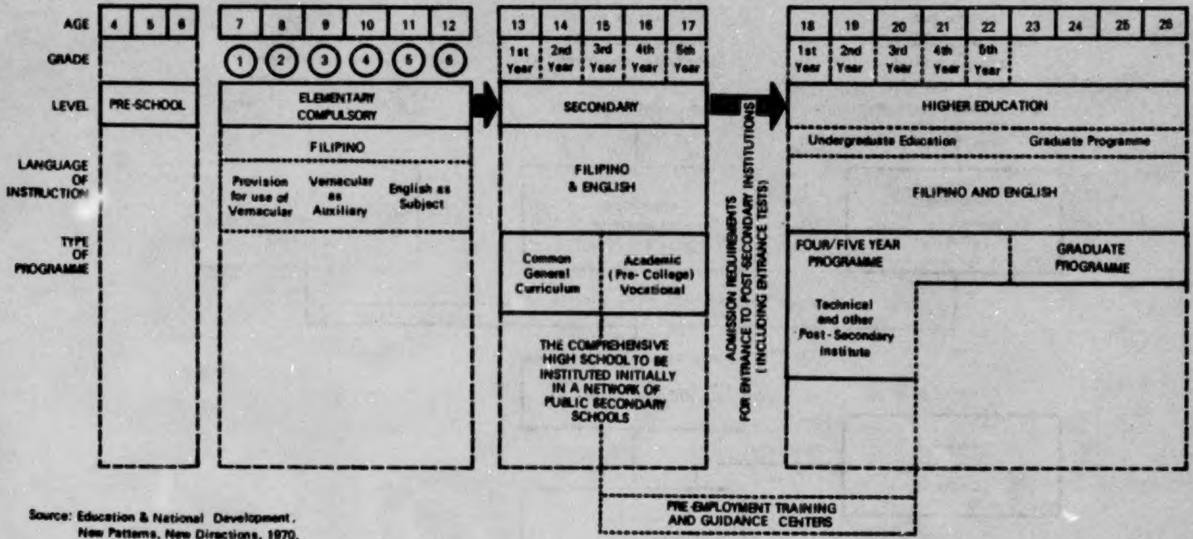
Field of Study	*Ratio*
1. Business Administration and Commerce	47:9
2. Engineering and Technology	47:3
3. Agriculture	45:1
4. Medical Sciences	39:6
5. Music and Fine Arts	27:0
6. Food, Nutrition and Dietetics	25:2
7. Teacher Education	21:4
8. Law and Foreign Service	17:2
9. Liberal Arts and Sciences	14:4
10. Unclassified Programmes	9:2

EDUCATIONAL STRUCTURE OF THE PHILIPPINES, 1970


AGE
GRADE
LEVEL
NATURE OF PROGRAMME
4
5
6
PRE-SCHOOL
7
8
9
10
11
12
1
2
3
4
5
6
⑦
ELEMENTARY Compulsory
PRIMARY
INTERMEDIATE
(By Law, Elementary Education includes Grade VII, however, only a very few schools have implemented Grade VII)
13
14
15
16
1st Year
2nd Year
3rd Year
4th Year
SECONDARY
General High School
Common Curriculum
Academic
Vocational
Vocational High School
Academic
Vocational
17
18
19
20
21
22
23
24
25
1st Year
2nd Year
3rd Year
4th Year
5th Year
TERTIARY
GRADUATE
Commerce
Teacher Ed.
Liberal Arts
Engineering
Law
A.B. Programme
Law Proper
Medicine
Two Year Voc/Tech
CONTROL & OWNERSHIP
ALMOST COMPLETELY PRIVATE
96% PUBLIC
4% PRIVATE
*60% PUBLIC
40% PRIVATE
92% PUBLIC
8% PRIVATE
Estimated Enrolment '70
Actual Enrolment '67-68
35,276
7,076,580
6,496,680
1,882,860
1,444,300
732,860
588,140

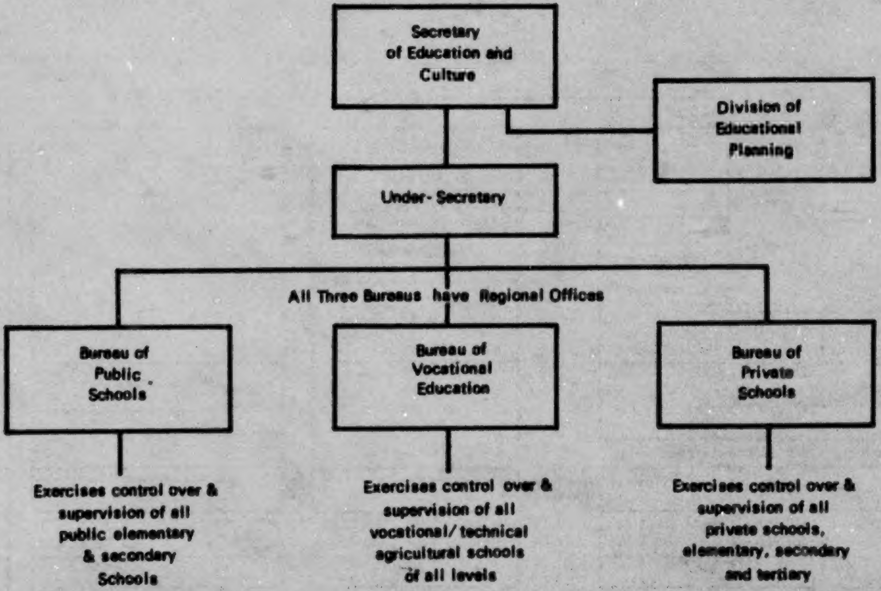
SOURCE: Education for National Development, New Patterns, New Directions., 1970

PROPOSED EDUCATIONAL STRUCTURE OF THE PHILIPPINES

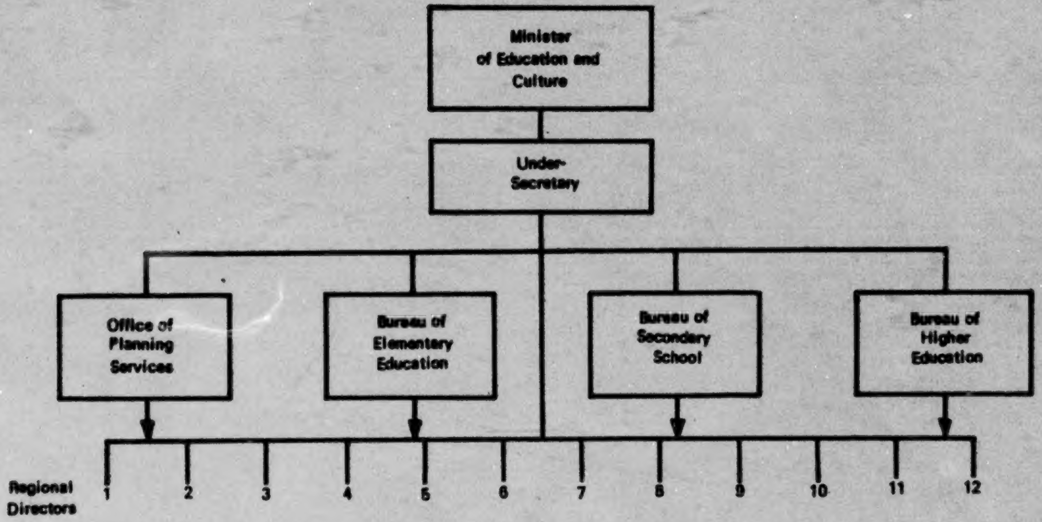

AGE
GRADE
LEVEL
LANGUAGE OF INSTRUCTION
TYPE OF PROGRAMME
4
5
6
PRE-SCHOOL
7
8
9
10
11
12
1
2
3
4
5
6
ELEMENTARY COMPULSORY
FILIPINO
Provision for use of Vernacular
Vernacular as Auxiliary
English as Subject
13
14
15
16
17
1st Year
2nd Year
3rd Year
4th Year
5th Year
SECONDARY
FILIPINO & ENGLISH
Common General Curriculum
Academic (Pre- College) Vocational
THE COMPREHENSIVE HIGH SCHOOL TO BE INSTITUTED INITIALLY IN A NETWORK OF PUBLIC SECONDARY SCHOOLS
ADMISSION REQUIREMENTS FOR ENTRANCE TO POST-SECONDARY INSTITUTIONS (INCLUDING ENTRANCE TESTS)
18
19
20
21
22
23
24
25
26
1st Year
2nd Year
3rd Year
4th Year
5th Year
HIGHER EDUCATION
Undergraduate Education
Graduate Programme
FILIPINO AND ENGLISH
FOUR/FIVE YEAR PROGRAMME
GRADUATE PROGRAMME
Technical and other Post-Secondary Institute
PRE-EMPLOYMENT TRAINING AND GUIDANCE CENTERS

Source: Education & National Development, New Patterns, New Directions, 1970.

Old Organizational Structure of the Department of Education and Culture


Secretary of Education and Culture
Division of Educational Planning
Under-Secretary
All Three Bureaus have Regional Offices
Bureau of Public Schools
Bureau of Vocational Education
Bureau of Private Schools
Exercises control over & supervision of all public elementary & secondary Schools
Exercises control over & supervision of all vocational/technical agricultural schools of all levels
Exercises control over & supervision of all private schools, elementary, secondary and tertiary

NEW ORGANIZATIONAL STRUCTURE


Minister of Education and Culture
Under-Secretary
Office of Planning Services
Bureau of Elementary Education
Bureau of Secondary School
Bureau of Higher Education
Regional Directors
1
2
3
4
5
6
7
8
9
10
11
12

Regional Directors have supervision and control of all levels of education in the respective region

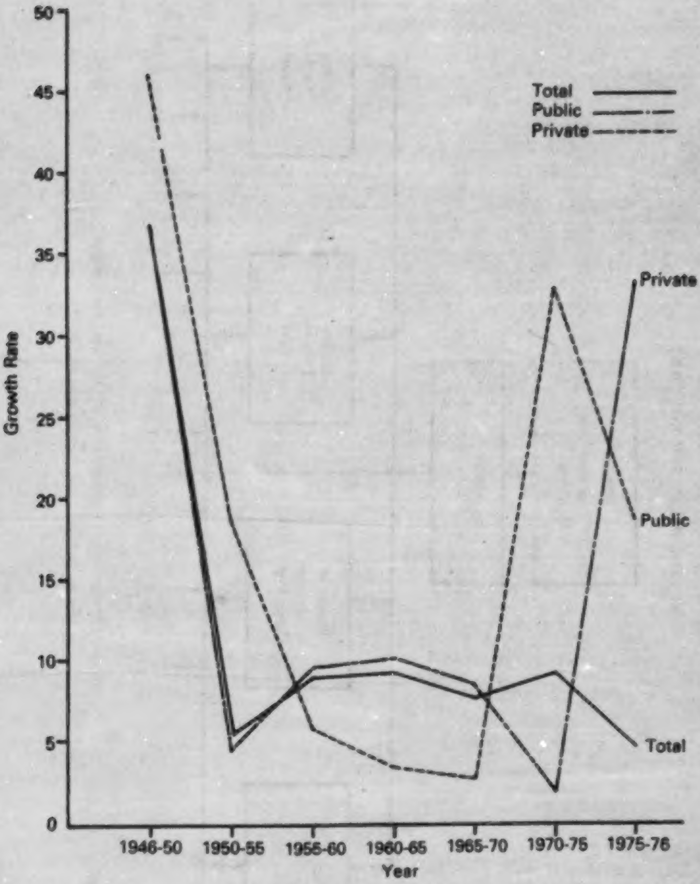


Figure 3.4 Growth Rate of Collegiate Enrolment by sector and by School year (In Percentage)

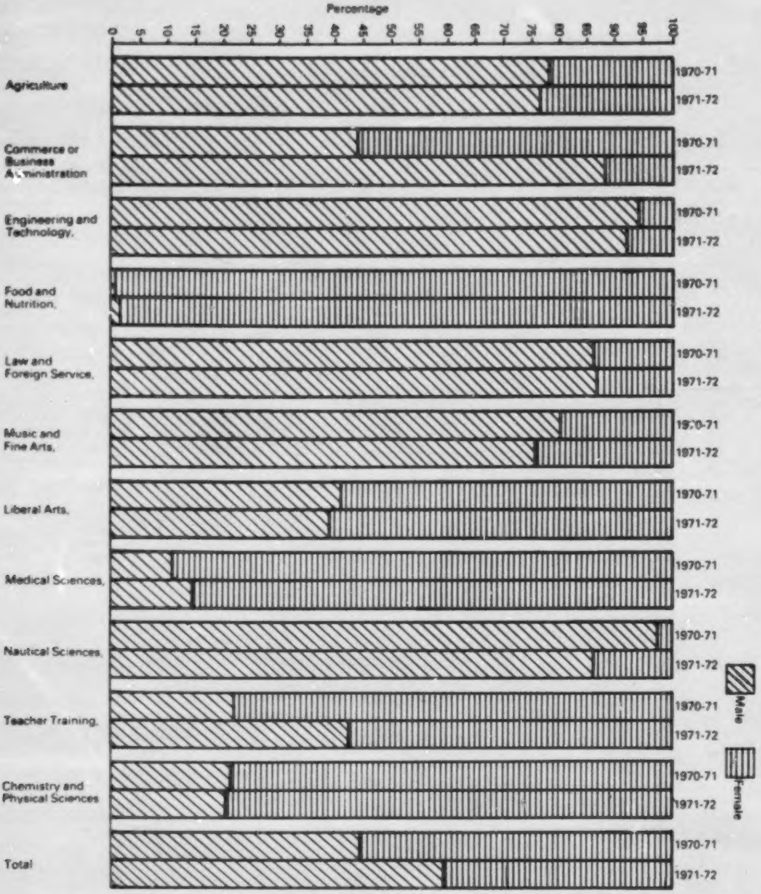


Figure 3.5 Distribution Across Field of Study

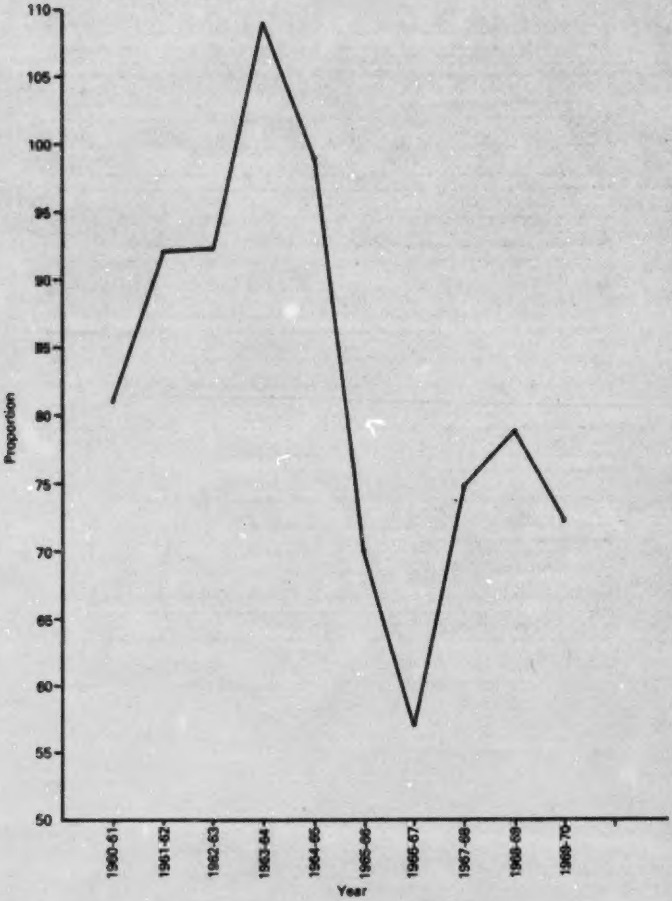


Figure 3.6 Proportion of First Year College Enrolment to High School Graduates SY 1959–60 to SY 1969–70

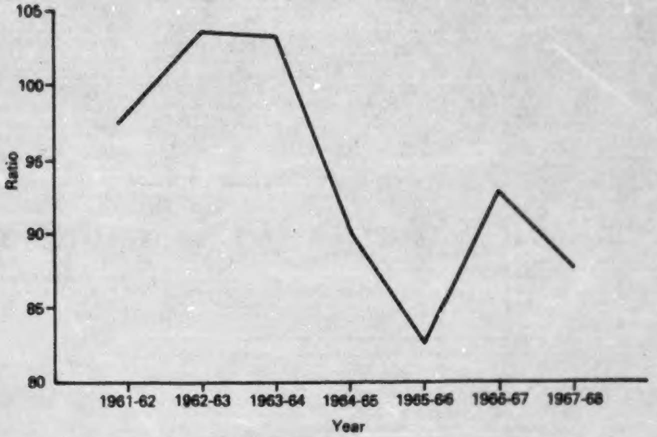


Figure 3.7 Proportion of Private First Year College Enrolment to High School Graduates, SY 1960–61 to SY 1969–70

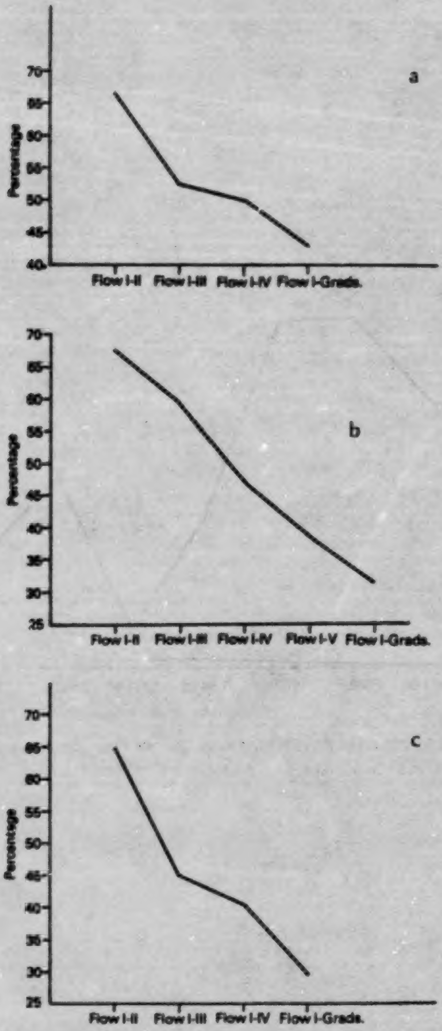


Figure 3.8 Trends of Flow of College Students in Private Schools per Curriculum Year SY 1960–1972 (per cent)

(a) Commerce
(b) Engineering & Technology
(c) Liberal Arts

Chapter 4

Manpower Planning and Educational Planning[1]

4.1 Introduction

The objective of this chapter is to assess the relationship of current manpower planning to educational planning. This chapter aims to present estimates of demand for and supply of highly qualified manpower and assess the usefulness of these estimates in the formulation of educational plans. It also makes suggestions on how to improve the relationship between manpower planning and educational planning.

Broadly described, manpower planning in the Philippines is aimed at (i) the reduction of unemployment and under-employment and (ii) the enhancement of the employability of the labour force. It involves first the estimation of manpower demand and supply by occupation to indicate the size of the gap between requirements and availabilities. Having estimated the gaps, one proceeds with some policy suggestions and programme recommendations to resolve the gap.

Educational planning, on the other hand, is concerned with the improvement of the quality of formal education, focusing on the implementation of changes in the curriculum, on the upgrading of teaching, etc. In the past educational planning has not shown much concern with the relationship between its products—the graduates—and the demand for them by the economic system. This accounts for the general absence of precise consistency between educational plans and manpower plans. However, in a developing country where there are greater resource constraints, unlike in developed countries, educational plans must be coordinated with manpower plans in order to minimize manpower wastage (as well as the resources concomitantly utilized).

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[1] **Based on contributions from staff of NMYC/FAPE and Professor G.M. Jurado.**

The acceptance in recent years by educational planners of the employment objective of education has given rise to the need for more integrated manpower and educational plans in the future. Nevertheless, there is still much to be desired in bringing about better coordination and integration between manpower planning and educational planning.

4.2 *Characteristics of the Present Labour Force and Employment Situation*

The Philippines is a developing economy with a very uneven distribution of income and wealth, low per capita income and a large surplus of skilled and unskilled labour. The salient features of its present labour force are presented to provide the necessary information for manpower and educational planning.

In 1976, unemployment stood at 5.0 per cent of the labour force 10 years old and over as can be seen from Table 4.1. This must not be confused with the 5.2 unemployment rate based on a labour force 15 years old and over. The presentation of employment status by sex and by region is constrained by the inclusion of the 10-14 year olds in the population. Its alteration to conform to the new definition of labour force adopted November 1976, which includes only those 15 years old and over, is not feasible due to lack of data. The number of male unemployed was 486.5 thousand or 4.6 per cent of the total male labour force. On the other hand, female unemployment was 331.0 thousand or 5.8 per cent of the total female labour force.

Unemployment rates by major occupation group in the experienced labour force are shown in Table 4.1. Rates are highest for manual workers, next highest for clerical workers and third highest for craftsmen and other production workers. The lowest unemployment rates occur among the executive and managerial workers for males and among the professionals for females.

Tables 4.2(a) and 4.2(b) show the labour force structure by economic sector. This Table is based on the "experienced labour force", therefore the unemployment figures do not include those who have never actually worked. A total of 413 thousand were unemployed among the experienced workers.

The labour force participation rate (proportion of the population 10 years old and over who belong to the labour force) was 51.8 per cent. On a regional basis, the labour force participation rate ranged from 46.4 per cent in Metropolitan Manila to 59.2 per cent in Northern Mindanao. Metropolitan Manila likewise registered the highest unemployment rate of 7.6 per cent while Eastern Visayas had the lowest (1.8%).

The low unemployment rate for Eastern Visayas is typical for regions where a high proportion of the labour force is engaged in agricultural activities and where underemployment is most prevalent.

The high unemployment rates for Metropolitan Manila, on the other hand, may be explained by the tendency of the rural population to migrate to urban centres in their search for higher income. These migrants tend to swell the ranks of persons looking for work in the Metropolitan areas.

The growth of employment in the Philippines has been estimated at 4.5 per cent per annum during 1971 to 1974.[1] Although such a rate in itself is respectable, it has not been enough to absorb the growth in the labour force.

Most developing countries are more prone to underemployment than developed countries. Low industrialization results in the proliferation of self-employed, unpaid family workers, the "invisibly underemployed", and the "visibly underemployed". "Invisibly underemployed" are full-time workers or employed persons working 40 hours or more a week and wanting additional work. "Visibly underemployed" are part-time workers or employed persons working for less than 40 hours a week and wanting additional work.

Of the 15.085 million employed persons (at work in August, 1976), some 3.557 million were part-time workers which means an incidence of 23.6 per cent "visible" underemployment. The incidence of part-time workers was highest among unpaid family workers and lowest among wage and salary workers. Partial employment is more common in the agricultural sector than in the non-agricultural sector.

This desire for additional work is indicative of income from one job which is not sufficient to meet basic necessities resulting in the need for better employment opportunities. It could also mean, however, that these part-time employees lack the training necessary for good-paying jobs. Their training qualified them for jobs whose pay-scales are not satisfactory; these are usually part-time and irregular in nature. The proliferation of unpaid family workers among the underemployed is proof of this. The level of unpaid employment in family enterprise also reveals that alternative employment opportunities are lacking.

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[1] *National Manpower Plan, 1978-82*, Appendix B, p. 32.

The "invisibly underemployed" totalled 804 thousand.[1] These full-time employees probably want additional or better work to augment their low wages. These low wages reflect their poor employability due to lack of training; they also reflect an overabundance of labour not readily absorbed into the economy, i.e., insufficient good employment opportunities.

At present, the government's development programmes and policies have focused on the development of labour-intensive production processes as a means of expanding the employment capacity of the economy. As a consequence, the relationship between education and manpower resources has been given more attention.

Labour productivity has been measured in terms of net value added per person employed in pesos at constant 1972 prices by major industry and year from 1966-1975. Mining and Quarrying, being the most capital intensive, had the highest value added per employed person. Other relatively high productivity sectors were Manufacturing, Electricity, Gas and Water, and Commerce. Productivity in the Construction sector showed a downward trend until 1971. From 1971 to 1976, however, productivity increased by 100 per cent, due mostly to the capital intensive infrastructure programmes of the government and the feverish activity in tourism-related constructions such as hotels, resorts, condominiums, restaurants and convention centres, which reached a peak in 1976 in preparation for the conference of the International Monetary Fund in Manila.

For all the years during the period under study agriculture posted the lowest output per worker. This is typical of the agricultural sector in many developing countries because it is plagued by low productivity, low incomes, high underemployment and lack of capital. It is hoped that the government programmes to provide credit to farmers and introduce new technology and varieties of crops will help to alleviate this perennial problem in agriculture.

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[1] *National Sample Survey of Households (NSSH) Bulletin*, August 1976, No. 47, Table 4, p. 6.

Labour productivity trend in terms of growth rate has been computed from 1966 to 1975. For all sectors, the output per worker in terms of 1972 prices grew by 20.14 per cent in a span of ten years. However, a higher growth rate was recorded in 1966-1970 (15.82%) than what had been achieved in 1971-1975 (7.68%). By industry, Manufacturing registered the highest rate with a more or less steady growth if the five-year pattern is to be considered (19.39% in 1966-1970 and 21.75% in 1971-1975). Other industries displayed varying growth rates. For instance, construction which boomed in the early 70's due to foreign borrowing and the peaking of the Tourism Industry had per worker productivity gains of 97.16 per cent in 1971-1975. Electricity, Gas and Water rose to 49.14 per cent in 1971-1975 as compared to its growth of 24.74 per cent in the preceding five-year period (1966-1970). Workers in the Service sector raised their output to 15.42 per cent in 1971-1975. It is interesting to take note however of the negative growth rate in Agriculture (–7.05) in the years 1971-1975 despite the government's introduction of programmes for better production such as the Masagana 99. This may be attributed to the increase in employment over the same period. Being labour-intensive, the increase in employment in agriculture outweighed the increase in output resulting therefore in lower productivity per person in spite of improved skills and technology.

The growth rate of total industrial labour productivity is relatively stable. However, the erratic movements of some industries' growth rates are very noticeable. Among them are Mining, Electricity, Commerce and Construction. The growth rate fluctuations in Mining may be attributed to the behaviour of the world market prices of copper and gold, two of our principal exports. Being capital intensive, quota limitations and international depressions have greatly affected it. In Electricity, Gas and Water, machine-operated firms shut down for repairs but maintain their labour force at the same level, resulting in fluctuations in its labour productivity growth rate. The growth rate in Construction abruptly accelerated during the post Martial Law period due to government policies such as increased foreign borrowing for construction.

4.2.1. STOCK AND FLOW OF HIGHLY QUALIFIED MANPOWER BY COURSE AND BY OCCUPATION

As of 1975, there were 1,206,286 academic degree holders in the Philippines. However, only 1,023,548 were in the labour force out of which 943,039 were gainfully employed. It is interesting to note that a significant proportion of the total academic degree holders fall under the Non-Gainful Occupation Group or are otherwise unemployed and not looking for work (182,738 or 15%).

The number of college graduate students by course and by year from 1965 to 1971 are available, published by the Department of Education and Culture; we have derived from these data the proportion of graduate students by course. The courses with the most graduate students are Teacher-training, Commerce and Business Administration and Liberal Arts. We should take note, however, that the number of graduate students in Teacher-Training decreased in the later years while the reverse trend is true for Commerce and Business Administration. In 1965, there were 44,859 graduate students in Teacher-training and only 15,179 in Commerce. But in 1971, there were 24,312 graduate students in teacher-training in contrast to 35,288 in Commerce. This may be attributed to the low returns on investment or income in the teaching occupation. On the other hand, the courses with the least number of graduate students are Chemistry and Nautical Sciences. The graduates in these courses are only about one per cent of the total number of graduate students in all courses. Thus, the need to develop a scheme to encourage others to take up these courses is imperative if we hope to attain a balanced highly qualified manpower stock.

In Table 4.3, the experienced labour force who are college degree holders by major occupation group is presented. We will limit the discussion to the 1975 Census survey since a comparison of the 1970 and 1975 figures is not proper. The 1970 classification was based on people employed in a particular occupation group for two consecutive weeks only. The 1975 figures, which are based on the occupation that a person is employed in most of the year, are more accurate. As of 1975, the occupations with the largest number of employees with college degrees were Professional (54.77%), Clerical (21.24%) and Administrative (6.09%). As expected, there are only a few college degree holders in Mining, Transportation and Stevedoring occupations. Most of the employees in these fields were not required to have a college degree to qualify for the positions they occupy now.

4.3 *Estimates of Highly Qualified Manpower Requirements for Social and Economic Development*

A. THE METHODOLOGIES ADOPTED IN THE NATIONAL MANPOWER PLAN—THEIR CORRESPONDENCE WITH THE NATIONAL DEVELOPMENT PLAN

As the manpower development component of the Five-Year Philippine Development Plan (PDP), 1978-1982, the National Manpower Plan (NMP) adopts a broad framework of assumptions used in projections of economic variables like output, labour force, labour productivity, school enrolment and school graduates.

Table 4.4 presents a summary of statistics needed in manpower development planning for the Plan period. The annual growth rate of gross national product (GNP) or the aggregate output of the nation's production of goods and services is estimated to increase from 7.0 per cent in 1978 to 8.0 per cent in 1982. The population growth rate is expected to be maintained at 2.9 per cent per annum, i.e., it is expected to increase from an estimated 46.3 million in 1978 to 52 million in 1982.

The labour force is composed of persons who are 15 years old and over who are gainfully employed or actively seeking work. The labour force participation rate is projected to be 62.0 per cent in 1978 and 62.5 per cent in 1982 or an average rate of 62.2 per cent for the Plan years. The labour force is projected to grow at a yearly average rate of 3.6 per cent.

An unemployment rate of 4 per cent is expected. Since employment is the difference between the labour force and the unemployed, the target employment rate for the Plan period is 96 per cent; it is expected to keep pace with the growth of the labour force. From 15.9 million in 1978, employment is projected to be 18.3 million in 1980, which means that the economy has to generate some 600,000 jobs annually to reach this target. The number of those employed with a college education is expected to increase from 1.26 million in 1978 to 1.45 million in 1982 (see Table 4.5).

The labour productivity per worker (at 1972 prices) is estimated to be P 4,299 in 1978 and P 5,021 in 1982 for an average yearly growth rate of 3.9 per cent.

In the economy's effort to move towards full industrialization, there will be an expected shift in production and economic activities which will also affect the sectoral distribution of employment. The percentage of labour force employed in Agriculture will decline during the Plan period, while an increase is expected in the share of total employment in industry and the service sector.

The Philippine Development Plan distributes employment at the sectoral level only. The National Manpower Plan breaks down the aggregate employment into appropriate distributions like occupational groupings, regional distribution, educational level, etc. using relevant proportions based on available data. The projected employment by occupational group for example has been obtained by using the 1970 Census proportions and applying the proportions to the projected total employment.

Neither Plan quantifies manpower requirements and availabilities by educational level. The Tertiary Education section in Chapter X (Education and Manpower) of the PDP sets out its objectives, targets, strategies and policies. The only indication of quantitative needs by educational level is found in the National Manpower Plan. The additional manpower requirements are broken down by sector, by occupational group and by region, but not by educational level. The projected supply of college graduates by field of specialization is, however, presented in the NMP.

B. THE PROBLEMS OF ESTIMATION

Reliable estimates require adequate and reliable benchmark data. Since estimates are based on past performance, targets are likely to be attained if the trend continues and unless some exogenous variables are introduced which will abruptly change the pattern.

The estimation of requirements for highly qualified manpower suffers from the paucity of baseline data. While the National Census and Statistics Office (NCSO) conducts regular surveys on the labour force during the year, it does not usually yield data on the labour force by educational attainment. The last labour force survey which describes the labour force by educational attainment was done by the NCSO in October 1965.

Census counts produce data on the experienced labour force by highest grade completed, by age group and by occupation group. These are included in Censuses 1970 and 1975.

Changing concepts of the labour force further complicate estimation procedures. The PDP and NMP both utilize the concept of the labour force as those persons aged 15 years and above. Prior to this, labour force data include persons aged 10 years and over. To segregate the labour force aged 10-14 is sometimes impossible because not all data are classified into age groupings.

Furthermore, there have been changes in the classification of administrative regions and occupational groupings. Existing data at the NCSO, before the imposition of Presidential Proclamation 1081, divides the country into ten regions. The PDP and the NMP divide the country into twelve administrative regions, the latest classification. The same may be said about occupational classifications. The NMP utilized the NEDA 1977 Occupational Classifications which updated or reclassified some occupations into groupings different from those used in previous surveys and censuses.

The absence of a labour market information system where job vacancies and/or skill requirements in the different labour markets are monitored limits furthermore the estimation of future demand for specific labour requirements. In addition to appropriately matching available manpower to requirements, trends could have been observed and estimates could be made.

Total employment can be projected by the input-output method. Labour productivity patterns in the past can be applied to an exogenously defined aggregate product. However, there is no available data on labour productivity per worker by educational level which could be used for this method of estimation.

C. THE ESTIMATED REQUIREMENTS FOR HIGHLY QUALIFIED MANPOWER

Social scientists adopt different approaches to predict future requirements for manpower by educational level. Manpower planners applied relevant ratios of Census 1970 by educational attainment to the projected total employment for each year under the Plan period to disaggregate employment into different distributions as needed. Mangahas-Quizon (1977)[1] utilized two procedures: (i) to get

[1] Mangahas, Mahar and Quizon, Jamie, "The Philippines in the Year 2000: Implications for Higher Education", in *FAPE Review* Vol. 8, No. 2, October 1977.

the estimated employment, they obtained an employment-output coefficient by sector and by educational attainment based on the 1965 labour force survey. These coefficients were then applied to the sectoral output targets for the year 2000; (ii) a country model was employed assuming that the state of the Philippine economy in the year 2000 will approximate more or less the economies of Japan, Argentina and the Netherlands in 1960. They used the employment-output coefficients by educational attainment of these countries to obtain demand for Philippine labour by educational level in the year 2000. Tan (1976)[1] proposed an over-simplified procedure which suggests that projected employment in the Professional-Administrative groups approximates more or less the demand for college educated labour inasmuch as these occupations require college education.

The estimation presented by the NMP and Mangahas-Quizon are premised on the assumption that the state of technology of the base year used (1970 in the NMP and 1965 in the Mangahas-Quizon) will remain the same over the period in study. As in any developing economy characterized by dynamism, the assumption may hold true in the short run. But the validity of the estimates becomes doubtful if used for long-range forecasting.

The estimates presented in this section are based on Census figures because it is believed that they are more reliable than survey counts and more up-to-date. To provide historical basis, the compound rates of total employment and the number in the experienced labour force who are college degree holders by occupation group were computed using the Censuses of 1970 and 1975. Table 4.3 presents the computed rate per occupation. While total experienced labour force who are college degree holders grew by 1.29 per cent over the five years, rates vary from declining (Professionals, Farmers and Craftsmen group) to very high rates (Administrative, Sales, Miners, Service and the residual group). The decline in growth rates is attributed to occupational mobility and the difference in the statistical bases of the two distributions. The 1970 figures are based on a 5 per cent sample of the population count conducted in that year, while the 1975 data are based on 100 per cent returns. Because of the varying rates obtained, some of which seem implausible, it was considered inap-

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1. Tan, Edita. *Careers of the College Educated,* IEDR Discussion Paper No. 76-14, Quezon City, 1976.

propriate to use the rates in projecting the demand for high level manpower.

Since the target demand should be in terms of the employed, total employment must be estimated. Using the employment rate of 1965, the total number of employed college graduates in the 1970 Census was estimated. Then employed college graduates for 1978-1982 (to be consistent with the Plan period) were estimated using the compound rate obtained and the 1970 estimated number of employed graduates as the basis.

To find the estimated number of employed college graduates by occupational group, the average percentage share by each occupation of the two censuses were applied to the estimated aggregate employment. The results are presented in Table 4.6.

Additional manpower requirements by major occupation group (the difference of employment between two consecutive years) are shown in Table 4.7. This is premised on a full retention rate, i.e. the employed in 1977 will still be holding the same job till 1982. The economy will require approximately 12,000 college graduates annually. Almost 90 per cent of these will be in the Professional, Administrative, Clerical and Sales groups combined. The remaining 10 per cent will be shared by the other seven occupation groups.

The estimates presented above utilized fixed proportions over time. Assuming that the professional group which is the greatest absorber of this type of labour will grow by an additional one-fifth per cent annually, additional manpower requirements for college graduates will be 12,422 in 1978; 13,590 in 1979; 14,872 in 1980; 16,213 in 1981, and 17,627 in 1982. These figures will further increase if a 3 per cent attrition rate is applied. The above figures plus the allowances for replacement due to attrition will be 39,114 (1978); 40,654 (1979); 42,344 (1980), 44,131 (1981), and 46,032 (1982).

Emigration is one factor which affects the Philippine labour market of highly qualified manpower. Recent emigration statistics show that there are already 1,328,908 Filipino workers employed overseas as of June 1977. If past trends persist, it would be safe to assume an emigration of 10,000 college graduates annually. If the economy were to provide replacement for them during these plan years, manpower requirements will subsequently increase by 10,000 annually. The yearly additional requirements for college graduates under different assumptions can be gleaned from Table 4.8.

D. COMMENTS ON THE RELIABILITY OF THE ESTIMATES

The absence of reliable benchmark data subjects the estimates to a wide range of arbitrariness. Forecasters, because of limited data, resort to many assumptions. Each approach has its own merits as well as limitations, but one common denominator that is lacking is a parameter which would reflect the changing technology over time. Hence, all the estimation procedures mentioned above assume a static level of technology in the economy due to the absence of this factor. In the short run, these methodologies may produce attainable estimates but not necessarily in long-term projections. The NMP estimates assume that the 1970 level of technology will prevail over the Plan period subject to the estimated growth rate of population, and the labour force. Tan's estimation is somewhat crude and does not consider the changing skill requirements of occupations due to the changing level of technology. Also in a labour market where supply exceeds demand, more labour is willing to be absorbed at a lower wage rate i.e. in occupations where they may be overqualified. That college graduates found in occupations normally not requiring college education are underemployed or underutilized, is subject to value judgement on the part of the individual. Some managerial positions do not require college education while some occupations in other categories need college graduates, e.g., Mine superintendents under the Miners group. Mangahas-Quizon's Experiment I is again subject to a constancy assumption, i.e., the 1965 employment-output coefficient is the same as that in year 2000. Also late developing countries show a remarkably faster growth in their economies as compared to the growth experienced by the now industrialized nations. This fact can distort the expectations of Experiment II.

The estimates presented herein may be actually understated. These projections were obtained on a historical basis, i.e., the absorptive capacity of the economy of its college graduates was restricted by not only the level of technology in production processes but also by socio-political situations in the past. Should both these factors change for the better, the pattern of the projections may likewise change. Strategies and policies contained in the Plan should be pursued vigorously.

4.4 *Estimates of Supply of Highly Qualified Manpower*

A. THE METHODOLOGY

The country's formal educational system supplies highly qualified manpower. Basically, estimates of college graduates are obtained by using the following formula:

$$S_g = kS_e$$

where S_g = college graduates
S_e = college enrolment
k = survival ratio

The average survival ratio for the different fields of study can be computd as follows:

$$k = \frac{\dfrac{G_1}{E_{1\text{-}3}} + \dfrac{G_2}{E_{2\text{-}3}} + \dfrac{G_3}{E_{3\text{-}3}} \quad \ldots \quad + \dfrac{G_N}{E_{N\text{-}3}}}{N}$$

where G_1, G_2, G_3 . . . G_N are number of graduates in time 1, time 2, time 3 to time N respectively; $E_{1\text{-}3}$, $E_{2\text{-}3}$, $E_{3\text{-}3}$ to $E_{N\text{-}3}$ are the number of enrolees three years back from time 1, time 2, time 3 and time N respectively, and N is the time period expressed in years for which the ratio is sought. The computed average ratios, using 1969-1972 as the data base, for the twelve major fields of study are (i) Agriculture—19.48 per cent; (ii) Chemistry—10.15 per cent; (iii) Commerce and Business Administration—21.07 per cent; (iv) Engineering and Technology—9.05 per cent; (v) Food, Nutrition and Dietetics—18.28 per cent; (vi) Law and Foreign Service—12.87 per cent; (vii) Arts and Sciences—14.1 per cent; (viii) Medical Sciences—15.44 per cent; (ix) Music and Fine Arts—32.30 per cent; (x) Nautical Science—18.78 per cent; (xi) Teacher-training—18.13 per cent and (xii) Graduate Studies—10.90 per cent.

The methodology and estimate presented in this section were provided by the Planning Service of the Ministry of Education and Culture.

B. THE PROBLEM OF ESTIMATION

The reliability of any estimate is partly dependent on the baseline data used for projections. In the estimation presented in this section, the enrolment and graduate figures may not be the actual magnitude for the year. Users of education statistics are aware that these data are not always up-to-date. This can be explained by the delay in the submission of reports of enrolments and graduations from schools in the different parts of the country. Moreover, before the reorganization of the Ministry of Education and Culture, the compilation of statistical data was being done by the statistical division of each Bureau. The Technical Staff of the Board of National Education usually came out with mimeographed hand-outs on *Education Statistics* which were a compilation of statistical data from the different bureaus. But since the publication is dependent on the data of the statistical divisions, it was almost always published in later years. Hence, the problem is providing reliable benchmark data.

Also, enrolment figures used in projections seem overstated when used as a base in estimating future highly qualified manpower. It is possible that college students enrolled in courses not requiring four years of education, i.e., associates or trade-technical, have been included in the count. Furthermore, some college students change specializations during their second or third year, in which case the distribution by major fields of any study might have been affected.

C. ESTIMATES OF THE SUPPLY OF HIGHLY QUALIFIED MANPOWER BY FIELD OF SPECIALIZATION

The supply of highly qualified manpower as provided by the country's formal education system is estimated for 1982 to be 185 thousand including graduates of post-graduate studies. These estimates can be gleaned from Table 4.9. Commerce and Business Administration graduates constitute the biggest bulk of college graduates with a percentage share of 54.2 per cent. Graduates in Arts and Sciences are projected to be 18.1 thousand in 1978 increasing to 2,500 in 1982.

The greatest projected growth is expected to be in the field of Agriculture which will be 20 per cent for the five-year period. The Medical Science graduates are targetted to grow by an average of 12 per cent while Engineering and Technology graduates will expand by an average of 10 per cent during the same period.

These estimates per se may be overstated due to double-counting. Graduates in the graduate level for example cannot be included as an available supply of manpower because the majority of the students in this group are working students and may be said to belong to the labour force already. Or if they are full-time students, they are usually on scholarship grants from their respective agencies or employers, hence, they are on study leave. If there are some full-time students who are studying at their own expense, their number may be negligible. For these reasons, graduates in post-graduates level should not be included as high level supply available to fill additional demands in the labour market. But their existence should be recognized as reflective of the quality of the country's high level manpower supply.

A portion of these college graduates do not actively seek work or do not belong to the active labour force upon completion of their college degrees. The latest Census (1975) reveals that 15.15 per cent of college graduates are not in the labour force. This group includes full-time housewives, full-time students, volunteers, discouraged workers and others. So, assuming that this rate will persist during the Plan years, the supply of highly qualified manpower will be reduced by this much and will be found to be 118.3 thousand in 1978; 125.0 thousand in 1979; 132.2 thousand in 1980; 143.7 thousand in 1981, and 151.0 thousand in 1982.

Users of these estimates should bear in mind that the effect of selective admission has not been taken into consideration. The National College Entrance Exam (NCEE) which was implemented in 1973 may effectively shrink college enrolment and consequently the number of college graduates, increase the survival ratio of college students, and affect the structural distribution of college enrolment-graduates by field of specialization.

The figures on supply presented above were based on the projected supply of college graduates by the Ministry of Education and Culture without taking into consideration the implementation of the NCEE. For the purpose of exercise, another estimate of supply is presented in Table 4.10, this time taking into account some effects of the NCEE. All successful NCEE examinees were assumed to enrol in the following year since those who did not actually enrol are likely to enrol in later years. Thus, late enrolees in earlier years would substitute for the late enrolees in succeeding years. Based on past trends, only about 50 per cent of the first year college enrolees finish college successfully. The dropout rates are already included in this 50 per cent survival ratio. However, with the institution of NCEE in 1974, the survival ratio is assumed to rise to 55 per cent in the first 3 years and further rise to 60 per cent in the next succeeding years. We then deduct 13 per cent from each year's college graduates as allowance for those who are working students, thus already absorbed in the labour force. Fifteen per cent is further deducted from the actual number of college graduates as allowance for those who are more likely not to enter the labour force even with a college degree. As can be seen from Table 4.10, the supply is a little lower than the supply projected by the Ministry of Education and Culture.

The estimate of supply for 1978 is 96.2 thousand and 139.9 thousand for 1982. (For details, see Table 4.10.)

D. FACTORS AFFECTING THE SUPPLY OF HIGHLY QUALIFIED MANPOWER

Estimates are premised on rigid assumptions based on past behaviour of the data. The estimates given above may be attained or not, depending upon the accompanying strategies and policies to attain these goals. However, it should be pointed out that the baseline data used here are of the pre-Martial Law era. Since 1972 several reforms have been instituted, mostly as a result of the findings of the Presidential Commission to Survey Philippine Education (PCSPE). These reforms will surely affect the estimates. One of these is the policy of selective admission to college courses through the NCEE. Whereas before, anybody who could afford college education could enrol in any chosen course, now only those who pass the NCEE are admitted. As has been previously stated, this will diminish college enrolment, increase the survival ratio, and affect the distribution of college graduates by field of specialization. To support this claim, findings in one of the studies conducted by the National Entrance Testing Center (NETC) on 225 schools revealed that enrolment in 4-year or more degree programmes for school years 1974-75 and 1975-76 decreased in the majority of the schools while it increased in the less-than-4-year courses. A decrease of enrolment in those academic programmes with an oversupply of graduates had also been observed.

The increasing cost of college education will deter poor but qualified students from entering college or force them to quit schooling even before completion of their courses. It is hoped that with the "Study Now, Pay Later Plan" the government has implemented, poor but qualified students will be able to obtain a college education. Other financial assistance schemes and scholarships should be extended to the greatest number of qualifiers.

Emigration figures have been alarming. While the economy benefits from this through foreign exchange earnings, the Philippine labour market is deprived of the skills that these emigrants possess. This is especially true in the Medical profession. The move of the Ministry of Labour to rationalize labour export should minimize the problem. Incentives must be given to highly skilled citizens to prevent them from migrating to other countries.

Because there is no career guidance and counselling system in institutions of higher learning the distribution of graduates among fields of specialization has been lopsided. Moreover, the Filipinos' devaluation of manual labour, the result of a history of colonialism, has resulted in too many students enrolling in courses aimed at white-collar occupations like Commerce and Liberal Arts, and in traditional high-prestige courses like Law, which do not have enough job openings for their graduates. Due to the absence of an educational planning institution, the educational system does not produce the kind of graduates, which the economy needs. What results is underemployment of these college graduates.

4.5 The Demand and Supply Gap of Highly Qualified Manpower

The Philippines ranks fourth in the entire world with regard to proportion of population which is college-educated. This fact represents both an asset and a problem for the economy. A large number of educated manpower could advance efforts to attain full development since it indicates a highly trainable manpower adaptive to new and changing technology. Engaged in research activities and exploring new technologies needed for development, highly qualified manpower could provide entrepreneurial leadership in labour-intensive industries. On the other hand, an overabundance of highly qualified manpower poses a problem to the economy in terms of provision of employment appropriate to their college training.

Based on estimates of the future demand for and supply of highly qualified manpower previously presented, the economy can expect to have more personnel available than will be required. Expressed in quantitative terms, there will be a surplus of 69,186 college degree holders in 1978 who will not be absorbed by the productive sector of the economy; this number will rise to 94,968 in 1982. Even estimating the effects of NCEE, there would still be a surplus of 47,108 in 1978 and 83,927 in 1982.

However, these estimates are based on past performance of the economy. It is foreseen that the gap may be actually diminished if complementary policies on both the demand side and the supply side are implemented. The policy of promoting labour-intensive industries and vigorous research activities which will utilize these available manpower can actually increase the demand. Educational reforms such as the selective admissions scheme, increasing the cost of education due to inflation, career guidance and counselling, and regionalization of institutions will eventually decrease the supply.

Other factors should also help diminish the unemployment rate of college graduates. The social goal of education will certainly lead some graduates to pursue other activities whether in the productive sector or in the service sector. Meanwhile, in the labour market, imperfections will be created by this oversupply. Where vacancies exist for jobs which do not require college education, applicants with college education will have an edge over other applicants with lesser educational qualifications. In labour markets where there is an abundance of overqualified manpower, firms tend to increase their educational qualification requirements and select only the best from among the crop of applicants. Thus, while some clerical jobs require only vocational education, some firms, especially those offering higher salaries, require a college education for this type of job. In terms of priority in absorbing job seekers with different levels of educational attainment, college graduates will tend to be absorbed more readily than those with a lower level of educational attainment. In other words, this surplus may not result in open unemployment of college graduates in the near future, but rather they may be seeking jobs where they are overqualified.

4.6 *Effectiveness of Education and Manpower Planning*

While planning had been adopted by the government to pursue development goals, educational planning and manpower planning may be considered relatively new fields in the Philippines. The PCSPE Report revealed that there was no educational planning in the country prior to 1970. Manpower planning followed the creation of a Manpower Development Council in 1968 which later on became the National Manpower and Youth Council (NMYC). In 1973, the NMYC came up with an Interim Manpower Plan FY 1974-1977. The first National Manpower Plan 1978-1982 has been released in 1979. Meanwhile, the Ministry of Education and Culture (MEC) has also prepared a Perspective Plan up to the year 2000.

In view of the youthful state of educational and manpower planning in the Philippines, an assessment of the effectiveness of education and manpower planning may be premature. An evaluation of the Interim Manpower Plan (IMP) FY 1974-1977 regarding its effectiveness is yet to be made by the manpower planning body. A comparison of targets and actual figures of employment in the IMP might constitute a reliability test of the estimation procedure rather than of the over-all performance of those sectors involved in attaining goals through strategies and policies outlined in the IMP. A comparison is presented in Table 4.11 of projected employment and the average employment from surveys conducted in 1974, 1975 and 1976, by economic sector.

It is necessary at this point to review the estimation procedures and the underlying assumptions utilized in the IMP. The input-output approach was adopted in estimating employment by sector to satisfy exogenously specified final demand. The 1965 input-output table was used. A productivity multiplier was introduced into the employment-output coefficients to permit the coefficients to change over the Plan years. The labour productivity was assumed to grow at 2.4 per cent annually. It was further assumed that the technology of 1965 would prevail during the plan period 1974-1977. A check with actual labour productivity growth showed that it grew by 10.93 per cent in 1974-75 at 1967 prices or 3.7 per cent in 1974-75 using 1972 prices. A comparison of the actual labour productivity growth rate using 1967 prices could not be made because the IMP utilized Fiscal Year figures while data on outputs at the National Accounts Office are published on a Calendar Year basis at 1972 prices.

Targets are exogenously defined and are likely to be set high. In the case of the employment targets for 1974 to 1977 as established by the IMP, employment for 1974, 1975 and 1976 were overestimated by 2.7 per cent, 5.1 per cent and 1.6 per cent respectively; this is significant considering the economic recession that occurred during the years 1974 and 1975. In particular the Mining and Quarrying and Manufacturing sectors were much overestimated. In the formulation of the Plan, it was the contention among policy planners that there would be employment expansion in the Industry sector which includes these two sectors, while a shrinkage was expected in the Service sector. But because of the recession, the industrial sector did not live up to expectations. Employment targets in Mining and Quarrying, especially the export-oriented sector most vulnerable to international trade fluctuations, were overestimated by as high as 48 per cent in 1975. The shortfalls in both price and volume of copper export were not foreseen by the planners. The Service sector on the other hand generated more employment than had been expected, mainly because of the big boost given by the government to the Tourism industry (see Table 4.11).

4.7 Conclusion and Policy Implication for Manpower Planning

Manpower development embraces all activities that affect the use of people as productive resources and the provision of the necessary skills needed by the economy to enable them to engage in productive activities; its ultimate aim is to improve the quality of life. It not only concerns itself with generation of employment per se or the provision of basic education or skills; employment must give returns to enable people to live decently and enhance their self-worth. The basic education or skills people receive must match the demand of the economy in order for them to fully utilize these skills. People should be provided with basic social services to advance their well-being.

The human resources development strategy of the country is outlined in the National Manpower Plan. On the demand side is the creation of productive employment while on the supply side is the development of the employability of the individuals. The employment strategy, through different employment-generating measures within the economy, attempts to generate additional employment opportunities to absorb new entrants to the labour force and at the same time to reduce unemployment and underemployment. The education and training strategy, on the other hand (in its effort to upgrade the employability of the labour force) plans to increase the coverage and scope of education qualitatively and quantitatively and to realign education goals along the manpower needs of a growing economy. These can of course be achieved through several policies indicated in the Plan. The implementing arms of the Plan are the twelve regional manpower development offices which are each expected to produce their respective regional manpower plans.

The strategies given in the Plan are in pursuit of the overall manpower development goals. Except for a few policies, it gives little emphasis to specific subgroups of the labour force. The implementation of policies for the benefit of each subgroup of the population depends on the different arms of the government which are designated to serve these subgroups.

For the purposes of this paper, the subgroup of highly qualified manpower needs to be segregated. While they are crossed out in the priority list of training clientele among the unemployed by virtue of their possessing college education, in reality, they constitute human wastage and represent negative returns to investments in education. Rather, they should be tapped by the economy for middle and higher level occupations and entrepreneurship through a *retraining scheme*. Because they already possess some basic skills, retraining costs will be minimum. Manpower planners must take this into consideration. While this may be only a temporary solution as such retraining schemes are shortlived, nevertheless it helps eliminate unemployment of college educated manpower.

Also, research activities must be intensified to utilize highly skilled manpower. On-going research regarding the appropriate technologies needed by our growing economy and the use of local resources, both human and otherwise, should be a priority. The country might be able to utilize these available manpower as research aides in this effort.

The problem of estimation lies in the insufficiency of baseline data. Ways should be studied to facilitate the compilation of data, especially education statistics, so that they are up-to-date. Manpower forecasting techniques of whatever subgroups of the population should be developed and consequently adopted, whichever suit the economy's characteristics and expectations. All variables which might eventually affect the estimates should be considered.

The development of a labour market information system becomes imperative in light of the existing extent of unemployment among college graduates. It should also serve as an effective allocation mechanism among the different regions of the country as well as among the different economic sectors.

A career guidance and counselling system should become a part of the educational system. If such a system should prove expensive to maintain in all secondary schools of the country, at least one should be established in each geographic area where more than one secondary school exists. Perhaps the policy of pooling resources among institutions of higher learning, as envisioned by the National Plan, should incorporate this move. Concurrent with this is the creation of Placement Boards or Services among schools of higher learning. A closer coordination among "users" (employers) and "suppliers" (educational institutions) of labour should be worked out.

As has been previously stated, human resource development is a communal undertaking. While the main task rests with the two government agencies (i.e., the Ministry of Labour and the Ministry of Education and Culture) directly involved in the development of people as productive resources, the attainment of this depends on the cooperative effort of all sectors of society concerned with the enhancement of human life.

Table 4.1 *Employed and Unemployed Persons in the Experienced Labour Force by Major Occupation Group by Sex: August 1976*
(In thousands, except %. The "Experienced Labour Force" consists of the employed worker plus the unemployed who worked before for at least two consecutive weeks on full-time basis)

Major Occupation Group	*Both Sexes*			*Male*			*Female*		
	Total	*% of Total*		*Total*	*% of Total*		*Total*	*% of Total*	
		Employed	Unemployed		Employed	Unemployed		Employed	Unemployed
Total All Occupation Groups	**15,840**	**97.4**	**2.6**	**10,283**	**97.5**	**2.5**	**5,558**	**97.2**	**2.7**
Professional, technical and related workers	873	98.7	1.3	346	98.5	1.5	527	98.9	1.1
Administrative, executive and managerial workers	144	99.0	1.0	114	99.6	0.4	29	96.7	3.3
Clerical workers	607	94.9	5.1	299	95.1	4.9	303	94.8	5.2
Sales workers	1,664	97.5	2.5	641	97.9	2.1	1,023	97.3	2.7
Farmers, farm labourers, fishermen, hunters, loggers and related workers	8,218	93.2	1.8	6,228	98.5	1.5	1,990	97.1	2.9
Miners, quarrymen and related workers	43	96.8	3.2	42	97.2	2.8	1		
Workers in transport and communication occupations	587	97.1	2.9	572	97.3	2.7	15	87.1	12.9
Craftsmen, production process workers and related workers	1,961	95.8	4.2	1,190	94.8	5.2	771	97.4	2.6
Manual workers and labourers, n.e.c.	357	90.3	9.7	342	90.0	10.0	15	96.9	3.1
Service, sports and related workers	1,342	97.2	2.8	486	96.2	3.8	856	97.8	2.2
Occupation not reported	44	84.6	15.4	23	81.2	18.8	22	88.1	11.9

Source: National Census and Statistics Office, *National Sample Survey of Households Bulletin*, Aug. 1976.

Table 4.2a *Employed and Unemployed Persons in the Experienced Labour Force by Major Industry Group and by Sex: August, 1976*

Major Industry Group	*Both Sexes*			*Male*			*Female*		
	Total	*Employed*	*Unemp-loyed*	*Total*	*Employed*	*Unemp-loyed*	*Total*	*Employed*	*Unemp-loyed*
Total, All Industry Groups	**15,840,387**	**15,426,978**	**413,409**	**10,282,815**	**10,022,207**	**260,608**	**5,557,572**	**5,404,771**	**152,801**
Agriculture, forestry, hunting and fishing	8279072	8126003	153069	6283930	6187899	96031	1995142	1938104	57038
Mining and quarrying	58408	56283	2125	55885	54081	1804	2523	2202	321
Manufacturing	1747749	1679846	67903	931414	887665	43749	816335	792181	24154
Electricity, gas, water & sanitary services	47328	45735	1593	43103	41825	1278	4225	3910	315
Construction	533886	491011	42875	525203	482328	42875	8683	8683	
Commerce	1912578	1863584	48994	798429	781766	16663	1114149	1081818	32331
Transport, storage and communication	571893	1550214	21679	550530	530729	19801	21363	19485	1878
Government, community, business and recreational services	1542515	1501227	41288	817690	792282	25408	724825	708945	15880
Domestic services	809175	792636	16539	110088	106817	3271	699087	685819	13268
Personal services other than domestic	289013	275953	13060	142609	134676	7933	146404	141277	5127
Industry not reported	48770	44486	42864	23934	22139	1795	24836	22347	2489

Source: National Census and Statistics Office, (unpublished).

Table 4.2b *Employed and Unemployed Persons in the Experienced Labour Force by Major Industry Group and By Sex: August, 1976*
(in percentages)

Major Industry Group	*Both Sexes*			*Male*			*Female*		
	Total	*Employed*	*Unempoyed*	*Total*	*Employed*	*Unemployed*	*Total*	*Employed*	*Unemployed*
Total, All Industries	**100.0**	**97.39**	**2.61**	**100.0**	**97.47**	**2.53**	**100.0**	**97.25**	**2.75**
Agriculture, forestry, hunting and fishing	100.0	98.15	1.85	100.0	98.47	1.53	100.0	97.14	2.86
Mining and quarrying	100.0	96.36	3.64	100.0	96.77	3.23	100.0	87.28	12.72
Manufacturing	100.0	96.12	3.88	100.0	95.30	4.70	100.0	97.04	2.96
Electricity, gas, water and sanitary services	100.0	96.63	3.37	100.0	97.04	2.96	100.0	92.54	7.46
Construction	100.0	91.97	8.03	100.0	91.84	8.16	100.0	100.0	—
Commerce	100.0	97.44	2.56	100.0	97.91	2.09	100.0	97.10	2.90
Transport, storage and communication	100.0	96.21	3.79	100.0	96.40	3.60	100.0	91.21	8.79
Government, community, business and recreational services	100.0	97.32	2.68	100.0	96.89	3.11	100.0	97.81	2.19
Domestic services	100.0	97.96	2.04	100.0	97.03	2.97	100.0	98.10	1.90
Personal services other than domestic	100.0	95.48	4.52	100.0	94.44	5.56	100.0	96.50	3.50
Industry not reported	100.0	91.22	9.78	100.0	92.50	7.50	100.0	89.98	10.02

Table 4.3 *Experienced Labour Force[1] who are College Degree Holders by Major Occupation Group*

Major Occupation Group	*1970*	*1975*	*Per Cent Distribution*		*Average % Share*	$P_0(1+r)$
			1970	*1975*		r
Total	**884,444**	**943,039**	**100.000**	**100.000**	**100.000**	**0.01291**
Professional, technical & related workers	550,311	516,523	62.221	54.772	58.496	–0.01259
Administrative, executive & managerial workers	41,042	57,422	4.640	6.089	5.365	0.06947
Clerical workers	155,513	200,371	17.583	21.247	19.415	0.05199
Sales workers	48,873	65,662	5.526	6.963	6.244	0.06084
Farmers, fishermen, hunters, loggers & related workers	26,750	25,936	3.024	2.750	2.887	–0.00616
Miners, quarrymen and related workers	602	1,156	0.068	0.123	0.096	0.13939
Workers in transport and communication	12,090	14,853	1.367	1.575	1.471	0.04202
Craftsmen, production process workers & labourers, n.e.c.	21,962	19,327	2.483	2.049	2.266	–0.02523
Service, sports and related workers	13,013	19,956	1.471	2.116	1.794	0.08928
Stevedores and related freight handlers & labourers, n.e.c.	1,526	1,827	0.173	0.194	0.184	0.03666
Occupations unidentifiable & members of the Armed Forces and Not stated	12,762	20,006	1.443	2.121	1.782	0.09408

[1] Experienced worker as defined in the 1970 Census refers to a person who has worked or has been employed for two consecutive weeks, with or without formal training. However, there are two differing concepts used here with regard to usual occupation. The 1970 Census refers to occupation as the kind of work done during the reference week by the person employed or the last work done by the unemployed but experienced worker, irrespective of the class of worker or industry in which the person is classified. The 1975 Census, on the other hand, defines the usual occupation as the specific job or kind of work performed by an employed person most of the year. Persons are considered working most of the year if they work for 10 hours a week for not less 26 weeks, or half of the year. Data presented herein for 1975 refer only to persons who engaged in gainful occupations.

Also, the 1970 figures were based on 5 per cent sample of the population census conducted in that year while, the 1975 data are based on a 100 per cent count.

Source of Basic Data: National Census and Statistics Office
1970 Census of Population and Housing–National Summary
1975 Integrated Census of the Population and Its Economic Activities– National Summary (Unpublished)

Table 4.4 *Selected Manpower Statistics: 1978-1982*
(in thousands, except %)

	1978	*1979*	*1980*	*1981*	*1982*	*Annual Average 1978-1982*
GROSS NATIONAL PRODUCT (in million pesos at constant 1972 prices)	83,250	89,494	96,206	109,902	112,214	
Growth Rate	7.0%	7.5%	7.5%	8.0%	8.0%	7.7%
POPULATION						
Total	46,351	47,719	49,137	50,557	52,026	
Growth Rate		2.9%	2.9%	2.9%	2.9%	2.9%
Labour Force Participation Rate	62.0%	62.1%	62.2%	62.4%	62.5%	62.2%
LABOUR FORCE						
Total	16,589	17,209	17,852	18,458	19,085	
Growth Rate		3.7%	3.7%	3.4%	3.4%	3.6%
EMPLOYMENT						
Total	15,922	16,521	17,138	17,720	18,330	
Growth Rate		3.7%	3.7%	3.4%	3.4%	3.6%
LABOUR PRODUCTIVITY						
Per Capita	P 4.299	P 4.454	P 4.613	P 4.814	P 5.021	
Growth Rate		3.6%	3.6%	4.4%	4.3%	3.9%
UNEMPLOYMENT						
Total	667	688	714	738	755	
Growth Rate		3.6%	3.7%	3.4%	2.3%	3.2%

Source: Republic of the Philippines, National Manpower & Youth Council, *National Manpower Plan* 1978-1982, Quezon City, 1977, Table 5.1

Table 4.5 *Projected Employment by Educational Attainment, 1978-1982*
(in thousands)

Educational Attainment	*1978*	*1979*	*1980*	*1981*	*1982*
TOTAL	**15,922**	**16,521**	**17,139**	**17,722**	**18,330**
No Education	2,123	2,203	2,285	2,363	2,443
Elementary	8,923	9,260	9,606	9,932	10,273
High School	2,846	2,952	3,063	3,167	3,278
College Started But Not Completed	764	793	822	851	879
College Completed	1,266	1,313	1,363	1,409	1,457

Source: National Manpower and Youth Council, *National Manpower Plan*,1978-1982, Table 3.5 p. 3.14.

Table 4.6 *Estimated Employed College Graduates by Major Occupation Group: 1977-1982*

Major Occupation Group	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*
TOTAL	**889,783**	**901,270**	**912,905**	**924,691**	**936,628**	**948,722**
Professional, technical and related workers	520,488	527,207	534,013	540,907	547,890	554,964
Administrative, executive & managerial workers	47,737	48,353	48,977	49,610	50,250	50,899
Clerical workers	172,751	174,981	177,240	179,528	181,847	184,194
Sales workers	55,558	56,275	57,002	57,738	58,483	59,238
Farmers, fishermen, hunters, loggers and related workers	25,688	26,020	26,356	26,696	27,040	27,390
Miners, quarrymen and related workers	854	865	876	888	899	911
Workers in transport and communication	13,089	13,258	13,429	13,602	13,778	13,956
Craftsmen, production process workers & labourers, n.e.c.	20,162	20,423	20,686	20,953	21,224	21,498
Service, sports and related workers	15,963	16,169	16,378	16,589	16,803	17,020
Stevedores and related freight handlers and labourers, n.e.c.	1.637	1,658	1,680	1,702	1,723	1,746
Occupations unidentifiable and members of the Armed Forces and not stated	15,856	16,061	16,268	16,478	16,691	16,906

Table 4.7 *Additional Labour Resource Requirements by Major Occupation Group*

Major Occupation Group	*1978*	*1979*	*1980*	*1981*	*1982*
Total	**11,487**	**11,635**	**11,785**	**11,937**	**12,094**
Professional, technical and related workers	6,719	6,806	6,894	6,983	7,074
Administrative, executive and managerial workers	616	624	633	640	649
Clerical workers	2,230	2,259	2,288	2,318	2,347
Sales workers	717	727	736	745	755
Farmers, fishermen, hunters, loggers and related workers	332	336	340	344	350
Miners, quarrymen and related workers	11	11	11	11	12
Workers in transport and communication	169	171	173	176	178
Craftsmen, production process workers and labourers, n.e.c.	261	263	267	271	274
Service, sports and related workers	206	209	211	214	217
Stevedores and related freight handlers and labourers, n.e.c.	21	22	22	22	23
Occupations unidentifiable and members of the Armed Forces and not stated	205	207	210	213	215

Table 4.8 *Additional Labour Resource Requirements Under Different Assumptions*

	1978	*1979*	*1980*	*1981*	*1982*
Assumptions:					
Zero Withdrawal Rate	11,487	11,635	11,785	11,937	12,094
Plus 1/5% annual increments of Professionals	12,422	13,590	14,872	16,213	17,627
Plus 3% attrition rate	39,114	40,654	42,344	44,131	46,032
Plus replacements for emigration of Professionals at 10,000 annually	49,114	50,654	52,344	54,131	56,032

Table 4.9 *Projected Collegiate Graduates in Public and Private Schools by Major Field of Study SY 1978-1982 (in thousands)*

Field of Study	*1978*	*1979*	*1980*	*1981*	*1982*	*Average % Share*
Total *	**144.8**	**153.0**	**161.7**	**176.0**	**184.9**	**100.0**
TOTAL**	**139.4**	**147.3**	**155.8**	**169.4**	**178.0**	**96.3**
Agriculture	6.0	7.4	8.5	10.5	12.4	5.3
Chemistry	.5	.5	.6	.7	.9	.4
Commerce and Business Administration	79.6	83.4	87.6	94.4	99.4	54.2
Engineering and Technology	13.2	14.4	15.6	17.7	19.2	9.6
Food, Nutrition and Dietetics	1.3	1.4	1.5	1.8	2.1	0.9
Law and Foreign Service	1.7	1.8	1.9	2.1	2.2	1.2
Arts and Sciences	18.1	18.6	19.1	20.1	20.7	11.8
Medical Sciences	7.3	8.1	9.0	10.3	11.3	5.6
Music and Fine Arts	2.4	2.5	2.7	2.9	3.0	1.7
Nautical Science	2.0	2.1	2.2	2.4	2.6	1.4
Teacher Training	7.4	7.0	7.0	6.5	6.2	4.3
Graduate Studies	5.3	5.6	6.0	6.5	7.0	3.7

* Including graduate studies

** Excluding graduate studies

Source: National Manpower and Youth Council, *National Manpower Plan 1978-1982*, (unpublished).

Table 4.10 *Projected Supply of Highly Qualified Manpower*

Year	NCEE Qualifiers-Enrolees	Year	College Graduates	Working Students	Col. Grad. minus Wor. Students	Not in Labour Force	Actual Supply
1974	236,577	1978	130.117	16,915	113,202	16,980	96,222
1975	273,569	1979	150,463	19,560	130,903	19,635	111,268
1976	261,227	1980	143,675	18,678	124,997	18,750	106,247
1977	278,041	1981	166,825	21,687	145,138	21,771	123,367
1978	315,436	1982	189,262	24,604	164,658	24,699	139,959

Table 4.11 *Employment Targets and Employment by Sector: 1974-1976*
(in thousands)

Sector	1974				1975				1976			
	Target	*Actual*[1]	*Diff.*	*% over target*	*Target*	*Actual*[2]	*Diff.*	*% over target*	*Target*	*Actual*[3]	*Diff.*	*% over target*
TOTAL, ALL INDUSTRIES	14,265.2	13,885.75	379.45	2.7	14,909.8	14,144.0	765.8	5.1	15,674.5	15,427	247.5	1.6
Agriculture	7,772.2	7.727.0	45.2	0.6	8,129.1	7,632.5	496.6	6.1	8,549.0	8,126	423.0	4.9
Mining	86.6	46.5	40.1	46.3	94.2	49.0	45.2	48.0	102.8	56	46.8	45.5
Manufacturing	1,876.1	1,442.25	433.85	23.1	1,999.6	1,545.5	454.1	22.7	2,158.9	1,680	478.9	22.2
Construction	380.6	394.0	(13.4)	(3.5)	405.0	437.0	(32)	(7.9)	437.4	491	(53.6)	(12.3)
Transport[4]	523.2	548.0	(24.8)	(4.7)	544.3	553.5	(9.2)	(1.7)	576.4	596	(19.6)	(3.4)
Commerce	1,734.3	1,558.75	175.55	10.1	1,800.2	1,598.5	201.7	11.2	1,807.2	1,864	(56.8)	(3.1)
Services[5]	1,892.2	2,169.25	(277.05)	(14.6)	1,937.4	2,328.0	(390.6)	(20.2)	2,042.8	2,614	(571.2)	(28.0)

1. Average of four (4) survey rounds.
2. Average of February and August surveys.
3. August 1976
4. Includes Electricity, Gas, Water and Sanitary Services
5. Includes Industry Not Reported

Sources: (1)National Manpower and Youth Council, *Interim Manpower Plan FI 1974-1977*, Quezon City, 1974.
(2) Labour Statistics Service, Department of Labour, *1977 Yearbook of Labour Statistics*, Manila, September 1977.

Chapter 5

The Choice of Educational Career, Assessment of Higher Studies and Professional Expectations of Students in the Higher Education System in the Philippines[1]

5.1 Introduction

The economic need for highly qualified manpower cannot be met properly if the individual aspirations and expectations of students are ignored in the formulation of national policy for the development of higher education. The qualitative and quantitative aspects of educational development have to be reconciled in order to have policies which are responsive not only to economic needs but to social needs as well.

Economic and social incentives play important roles in the shaping of student aspirations and expectations. These expectations are reflected in the factors affecting the pursuit of higher education and the choice of occupational career.

5.2 Evaluation of the Secondary Education From the Point of View of the Universities' Requirements (NCEE tests)

5.2.1 BASIS OF THE NCEE

In the past, there was a general open system of admission into colleges and universities. This resulted in massive college enrolments and in an acute imbalance between the number of college graduates and the number the labour market could absorb.

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[1] Based upon the contributions from the staff of EDPITAF and NETC.

The Presidential Commission to Survey Philippine Education (PCSPE) found that of the 92,601 college graduates in schoolyear 1971–72, the bulk or 38 per cent (35,288) took commerce and business administration, followed by teacher-training, 24,312 or 26 per cent, and arts and sciences, (including chemistry) 13,991 or 15 per cent. These three courses accounted for 80 per cent of total collegiate graduates during the schoolyear. The other courses: Engineering and Technology (including Nautical) had 7,153 graduates or 8 per cent of the total; medical sciences, 5,220 or 6 per cent; law and foreign service, 1,647 or 2 per cent; food, nutrition and dietetics, 1,038 or 1 per cent; music and fine arts, 633 or 1 per cent; graduate studies, 1,230 or 1 per cent, and agriculture, 1,561 or 2 per cent.

The distribution of college graduates by course of study indicated the lack of relevance to the country's developing state of economy. For instance, there was an oversupply of commerce and business administration graduates and an inadequacy of agricultural graduates. This resulted in a lack of middle manpower needed for the country's development.

The PCSPE likewise found that over the years 1964 to 1968 almost one-half of the college graduates in commerce and law were employed in non-commercial, non-legal occupations, and that even scientists and engineers were frequently employed in non-technical jobs. In simple words, many high school and college graduates were underemployed.

All these data point to a sizeable oversupply of college-trained manpower; this has contributed to underutilization of manpower. In 1969, of the 1,007,130 people who completed 4 to 5 years of college, 610,785 or 61 per cent were employed. In Manila, statistics indicate that for every 4 college graduates, only 1 is employed.

Motivated by these appalling statistics, PCSPE recommended cutting down of college enrolment, through accreditation of schools, selective admission and collection and dissemination of information on the labor and education markets.

This led to the promulgation of the "Educational Development Decree No. 6-A." This law contains the policy of the government relative to education: to ensure, within the context of a free and democratic system, a maximum contribution of education to the attainment of the national development goals which the New Society has envisioned.

To attain these goals through higher education, Section 4 of Presidential Decree (PD) 6-A stipulates that the educational system should aim to develop the high level professions to provide leadership for the nation, to advance knowledge through research, to apply new knowledge for improving the quality of human life, and to respond effectively to the changing needs and conditions of the nation through a system of educational planning and evaluation. It further states that a programme shall be formulated based on upgrading academic standards through admission testing.

It is within this context that PD No. 146 entitled "Upgrading the Quality of Education in the Philippines by Requiring All High School Graduates Seeking Admission to Post-Secondary Degree Programmes Necessitating a Minimum of Four Years' Study to Pass a National College Entrance Examination (NCEE) and Appropriating Funds therefore..." was promulgated on March 9, 1973 (See Annex I).

As an agency of the national government, the National Educational Testing Center of the Ministry of Education and Culture (NETC-MEC), in addition to its measurement, guidance, research and test development services, is charged with the implementation of the objective of the NCEE—that of maintaining the highest quality of education in the Philippines by regulating the admission of students from the secondary to the post-secondary institutions of learning in order to promote national development. The ultimate goals of the NCEE are to avoid any indiscriminate waste of manpower resources and to help maintain a viable balance between white-collar employees and skilled workers in the manpower stock of the country.

5.2.2 THE NATIONAL COLLEGE ENTRANCE EXAMINATION (NCEE)

The NCEE is a battery of tests which has been designed to assess student abilities which are essential for successful college work. It measures a student's potential for learning. It is also intended to complement or supplement a school's existing assessment procedures for career counselling.

The content of the NCEE was the result of research conducted to determine the abilities needed for college success. Although the responses of the respondents in this research varied widely, two groups of abilities were identified: Mental and Personal-Social. Among the mental abilities considered most essential for college success are the ability to:

(a) communicate one's ideas;
(b) express oneself in speaking and writing;
(c) comprehend what one reads;
(d) organize logically one's ideas;
(e) do mathematical exercises and problems;
(f) do verbal and abstract reasoning.

Personal-Social skills were of less importance compared to the above abilities.

Based on the results of the survey and on other factors that have some important bearing on the purpose of the NCEE, seven subtests which covered four areas were included. The four areas are: *Verbal Ability* (VA), *Mathematical Ability* (MA), *Reasoning Ability* (RA), and *Reading Comprehension* (RC). The VA *score* is a measure of the ability to understand and use English words correctly and to identify correct English usage. The MA *score* measures the ability to understand number relationships to manipulate and deal intelligently with quantitative concepts. The RA *score* is a measure of the ability to perceive and abstract and/or generalize relationships, to reason with words and with abstract figures and symbols. The RC *score* measures the ability to perceive the main idea of what is read, to make inferences, and to organize ideas logically. The *General Scholastic Aptitude* (GSA) score, the overall score, is the average of the standard scores in the four areas. It serves as the basis for admission to four-year or more degree programmes.

5.2.3 PREDICTIVE VALUE OF THE NCEE TESTS FOR SUCCESS IN HIGHER STUDIES

To be a good measuring instrument a test must be valid and reliable, that is, it must measure what it intends to measure and it must be consistent in measuring what it intends to measure. To establish these characteristics, a pretesting programme was launched and the data from this were used to investigate and verify the concurrent and predictive validity as well as the reliability of the test. One may, therefore, say that the higher the test score in the NCEE is, the greater is the probability of succeeding in college. The NCEE scores when used in combination with high school grade point average further enhance the predictive power of the test. In view of the time element involved in determining predictive validity, studies of this usually take years to accomplish.

A validity coefficient is a correlation between test score and a criterion measure. An initial study to establish the predictive validity of the 1975 NCEE was done by correlating first semester 1976 grade point averages (GPA) in college (the criterion) with scores on each of the four areas (RA, MA, VA, RC) and on the GSA of the NCEE (the predictor). As of this writing, data gathered from only 16 universities and colleges in different parts of the country have been included in this initial report. Of this number, five are in Manila, four are in Luzon (North), six are in Mindanao (South), and one is in Roxas City (Central).

Validity coefficients ranging from 0.14 to 0.72 between GPA and GSA, and between GPA and each of the four NCEE areas obtained for Pamantasan ng Lungsod ng Maynila, a government university with a selective admissions policy, are all positive. Some of these coefficients are significant at 0.01 level. The same is true for Philippine Christian University, a protestant university (except for two coefficients that are negative) and for the University of the East, University of Pangasinan, and other schools, which are quite liberal in their admission procedures.

Similar findings were obtained when the examinees' second semester GPA's were correlated with their NCEE-GSA scores. Although the computed *r*'s are slightly lower than those of the *r*'s of the first semester, the reliabilities were still found to be moderately predictive for admissions purposes with *r* estimates concentrating about 0.44 and 0.66 in most of the institutions included in the sample. This means that the GSA score in the NCEE is capable of predicting success in college up to the second semester (as far as available data are concerned). The NCEE was found to be especially predictive with courses like Business Administration, Nursing, AB/Arts, Education, and Social Work.

In instances where negative correlations were obtained, and even in those where the values of *r* are positive but low, some explanations can be offered. The University of the Philippines, for instance, is very highly selective in its admission procedures, hence students admitted to this institution are more or less homogeneous in abilities.

Therefore the range of NCEE scores is restricted, resulting in low correlations. On the other hand, in colleges and universities where admission procedures are more liberal, students accepted have a wider range of abilities, thus resulting in moderate and, in a few cases, high validity coefficients. In those cases of negative correlations, one possible reason that could account for this is the wide variations in the grading system adopted by colleges/universities and/or the professors themselves. Another possible reason could be the students' problems in adjustment and motivation (the grades used are 1st year 1st semester GPA's), especially in an environment where one has to adapt to new and varying situations and to acquire a new set of friends. In fact, a host of other factors may come into play and all these, directly or indirectly, affect students' achievements in college.

For the proper interpretation of a validity coefficient, the form of the relationship beween test and criterion should also be considered. For instance, the computation of a Pearson *r* is based on the assumption that the relationship is linear and uniform throughout the range, that is, equal variability throughout the range of the bivariate distribution. If these assumptions are violated, the result might be something "abnormal" as in a situation where low-scoring students will perform poorly in the course, but among the high-scoring students, some will perform well in the course, while others will perform poorly for some reason or other.

To quote Anastasi (1968), "A test may appreciably improve predictive efficiency if it shows any significant correlation with the criterion, however low. Under certain circumstances, even validities as low as 0.20 or 0.30 may justify inclusion of the test in a selection programme...."

At this point, it is also important to mention that findings of studies conducted by interested researchers and graduate students on the predictive validity and technical adequacy of the NCEE are consistent with those found by the NETC. Like the findings of the NETC, other studies (Ravelo, 1973; Gumban and Iledan, 1972; Ora-Maniquis 1974; Kerr, 1973) also found that the NCEE scores when used in combination with high school grade point average adequately predict success in college.

Since institutions of learning vary in many respects—curricular offerings, physical conditions, grading practices etc.—the wise use of NCEE scores can yield institutional validity studies as well as predictive validities in every degree programme. Institutions can investigate the usefulness of the NCEE scores solely or in combination with other measures, in predicting student academic success in college in general or in each degree programme in particular. Results of such studies can be utilized as a basis for reviewing admission policies.

5.2.4 NCEE AS A GUIDANCE INSTRUMENT BEFORE UNIVERSITY ENTRY

In the old days, when the selection of a college course was at best anchored on a whim and a dream, high school graduates moved to college hardly sure of their own choice of a college course or the soundness of their parents' counselling on "what they ought to become if they intend to be successful".

But not any more. Not with the introduction in the Philippine educational system of career guidance and counselling centres or units which are geared to meet the entire range of student counselling needs in matters affecting personal, social, vocational, and academic adjustment. In sum, career guidance centres aim to remove all traces of guesswork in career selection as well as the pervasive influence of parents and childhood whims and dreams about lucrative and exciting jobs in the future.

Also, while it is true that a democratic educational system opens its educational opportunities to everybody, it should not, however, leave the door open to everybody. An open educational system needs admissions services in colleges and career guidance services in high schools, not only for economic reasons but also because its very nature is educational. Thus, the transition from secondary school to higher education is a crucial step necessitating guidance, counselling, selection and placement services. In response to this challenge, the Secretary of Education and Culture issued Department Memorandum No. 308, dated December 16, 1976, on the organization of a central support system and feedback monitoring mechanism for testing and guidance, and specifically designated the Research and Guidance Unit/Division of the National Educational Testing Center as such.

Currently almost every large private and public school in the Philippines boasts of a career guidance team and easily, one of the instruments that can serve as a good source of information about a student is the NCEE. The NCEE ratings are intended to supplement other test data that a guidance counsellor uses in career counselling. Specific strengths pointed to by high percentiles in certain subtests/ areas of the NCEE could be additional information used in channelling the students into appropriate college programmes or vocational courses.

Bennett, Seashore and Wesman (1966) claim that a combination of scores in Verbal Reasoning and Numerical Ability measures general scholastic aptitude. In the 1975 NCEE, Reasoning Ability and Mathematical Ability constitute equivalent measures. A combination of scores in these two subtests would then serve the same purpose as would a general scholastic aptitude test. Examinees therefore who score on or above the 50th percentile on these two particular areas would most likely do well in college.

In the following college courses, it would seem that potential for success would be indicated by good performance (50th percentile and higher) in the pertinent areas of the 1975 NCEE battery.

"College" in general	Verbal Ability Mathematical Ability Reasoning Ability
Office Work or Clerical Stenography	Verbal Ability (basic skills) Reading Comprehension
Journalism: Advertising	Verbal Ability Reading Comprehension
Lab. Asst., Bookkeeper, Statistician, Carpentry, Tool Making	Mathematical Ability Reasoning Ability
Accounting/Commerce	Mathematical Ability Reasoning Ability
Mathematics, Physics, Chemistry, Engineering and Physical Sciences	Mathematical Ability Reasoning Ability

In this sense, the NCEE could be utilized for Career Guidance. However, when utilizing the NCEE rating for Career Guidance, one should avoid making it the sole criterion for making career choices and decisions. The NCEE results tell nothing about the student's perseverance, industry, honesty, etc. In life career development, there are many factors affecting choices in the life span of the individual, and these should be taken into consideration in guidance work.

Furthermore, a single test can at best show only a fragment of a personality. Different types of tests such as interest, personality, attitudes, values, and self-concept scales plus information gathered from observation and interviews, are needed for an adequate or more complete picture of a student. All this information related to economic directions in the future and information on social influences should facilitate wise occupational decisions.

To complement and supplement the present NCEE, the NETC is also developing a Philippine Specific Aptitude Test Battery which focuses on assessing the specific abilities and skills that are important for particular occupations. This instrument consists of 13 test booklets for specific fields of study and for assessing abilities and skills common to almost all fields of study, the latter include tests for verbal ability and mathematical-ability. For specific fields, eleven test booklets intended to measure perception, spatial relations and orientation are included.

With the hope of providing as much information as possible about the examinees, an innovation in the NCEE report card that will be released in March, 1979 will hopefully include not only the standard scores and the corresponding percentile ranks in the different subtests, but also the regional profile plus one very important component: the relative standing of the student in a particular university or college he or she aspires to enrol in as compared with the rest of the applicants to that university or college.

5.2.5 STATISTICAL ANALYSIS OF THE CHARACTERISTICS OF CANDIDATES FOR HIGHER EDUCATION

The National Educational Testing Center (NETC) foresaw the data-generating potential of the NCEE programme. Hence, it developed a questionnaire called Student Descriptive Questionnaire (SDQ) which NCEE applicants complete upon registration for the examination. The SDQ elicits demographic, sociological, psychological, socio-economic, and attitudinal information about the examinees. These data make possible the interpretation of test results within the framework of several factors affecting college-bound individuals. Moreover, these data provide a descriptive profile of those seeking college admission which is important to college administrators and other authorities in the field.

Several studies have already been completed using NCEE results and more are on-going. A summary of some findings is given in this report. Since most findings based on the four consecutive administrations the NCEE in 1973-'74-'75-'76 were generally consistent, the figures to be presented in this report will be mostly that of the 1975 NCEE because it is the most complete.

A view of in-school and out-of-school registrants and examinees during the four years 1973-1976 shows that the yearly participation of graduating or graduated high school students in the NCEE ranges from 97.11 per cent to 98.05 per cent. A yearly increase of registrants as well as actual examinees, whether in-school or out-of-school is also discernible.

After each administration of the NCEE, a decision is made by the NCEE Advisory Board on how many of those who took the examination will qualify to go to the four-year degree courses and how many to the less than four-year or to the non-degree courses. During the first year of the implementation of PD 146, the cut-off score was set at the 25th percentile. The NCEE Advisory Board raised it to the 30th percentile the following year and it stayed so the next three consecutive years. This cut-off means that 30 per cent of the examinees are directed towards vocational-technical courses and 70 per cent, towards four-year or more degree programmes. The decision on what cut-off to adopt has been based on a number of factors such as the employment rate of college graduates, the absorptive capacities of vocational-technical institutions, the manpower plan of the country, the attrition rates, and the actual performance of the examinees in the different regions.

As a matter of stressing the need for trimming enrolment at the third level the required ratio of new students enrolling in academic and professional courses and in vocational-technical courses is 1:3 in order to balance demand and supply of resources in the country. While the NCEE Board would like to subscribe to this quota, the absorptive capacities of vocational-technical institutions is likewise considered. In like manner, the importance of studies/statistics on the employment rate of college graduates, as well as the manpower plan of the country, by the National Manpower and Youth Council (NMYC) and the National Economic and Development Authority (NEDA) respectively, cannot be overlooked in any decision on the NCEE cut-off score.

In the 1975 NCEE, attempts were made to find out how the examinees performed vis-à-vis a number of variables. Table 5.1 indicates the performance of the males apart from the females in the subtests and the GSA. Although there were more females, no significant differences in performance between males and females were found in any of the subtests now in the GSA. This is attested to by t values that range from 0.30 for Reasoning Ability to 0.64 for Verbal Ability.

Since no significant differences were found between sexes, regional means were determined with both sexes combined. Data on these are found in Table 5.2. Results reveal that all but three regions obtained mean standard scores in the four areas and GSA which are lower than the national mean scores. These three regions are Regions IV, V, and VII (Southern Tagalog, Bicol, and Central Visayas, respectively). These results do not appear surprising considering that educational institutions abound in these areas, not to mention the cosmopolitan environment, oral and written forms of media and other pedagogical and social avenues that could have directly or indirectly enhanced the intellectual potentials of examinees from these regions.

To show how each age group performed in the NCEE Table 5.3 is presented. As can be gleaned from the table, the NCEE examinees are mostly 15-16 year-old boys and girls. A significant number also come from the 17-18 age group. Performance-wise, generally the data suggest that the younger the examinees, the higher are their mean standard scores. The examinees who made up the 14 and below and the 15-16 age groups obtained significantly higher mean scores compared to those of the 17-18 and the 19 and above age groups.

The empirical evidence on the examinees' socio-economic status in relation to their performance in the NCEE is found in Table 5.4. The obtained chi-square value of 47,721.94 is significant beyond the 0.001 level of confidence. The students coming from higher socio-economic levels generally scored better in the NCEE. This finding, however, does not preclude instances where those from the low income brackets obtained even higher scores than those coming from the advantaged families. In fact more than six per cent of the examinees from the lowest income group obtained scores above 90th percentile.

The data in the last column of the same table show comparatively that the greater number of aspirants to college come from the poorest families of Philippine society: those with a combined family monthly income below P. 250.00. Of the 112,481 students coming from this income bracket, and using the national standard of 30th percentile as the cut-off point, more than half of the examinees (57.78%) qualified for enrolment in 4-year or more degree programmes. If the cut-off score were raised to 50th percentile, the figures would show that about 33.31 per cent of this income group would still qualify to go to college.

The analysis was extended to the variables of "mother's and father's educational attainment" revealing that direct relationships exist between father's and mother's educational attainment and student's performance on the NCEE ($X^2=49,407.82$ and $X^2=45,587.01$, respectively). In other words, those examinees whose fathers and mothers are college graduates and/or have master's degrees/doctorates tended to score in the upper percentiles (71 and above). Those whose test performances fall in the 40th percentile and below were those whose fathers and mothers had elementary schooling or less. What this finding underscores is the importance of both mothers' and fathers' college education as a factor influencing positively the academic achievement of students. On the basis of these findings, it may be implied that better educated parents take more interest in their children's schooling and provide more encouragement for them to do well in school.

Out of a total of 393,829 examinees, 271,837 or 69.02 per cent have plans of pursuing college education. Moreover, a sizeable 119,760 or 30.41 per cent think that they "may" go to college. These figures indicate that practically all fourth year high school students aspire to go to college. This shows how much Filipinos in general look up to the attainment of a college degree. Those who expressed plans of going on to college tended to score in the upper percentile groupings (60 and above). Examinees who were quite sure that they would not go to college were those who generally did not make it to the 30th percentile cut-off.

A significant relationship was found between performance in the NCEE and course preferences ($X^2 = 14{,}988.86$, df 56, $p < 0.001$). This is shown in Table 5.5. Examinees who preferred to take courses related to Personal Services and Domestic Skills obtained scores in the 29th percentile and below. Those who intended to take up courses such as Agriculture and Fishing Arts obtained scores in percentile ranks of 50 and below, while those who wanted to take up courses in Business, Clerical and Public Service had scores between the 51st and 80th percentiles. Technical, Engineering and Social Science courses seem to be the choice of examinees who scored in the 70th percentile and above. It may be noted that there are a number of examinees who qualified for 4-year or more degree programmes and yet opted for vocational technical courses.

The examinees were asked who usually chooses or decides on the course they are going to take up in college. The data suggest that the examinees who obtained scores falling below the 40th percentile intend to take up courses which are their parents' choice. On the other hand, it is gratifying to note that examinees who scored in the 50th percentile and above appear to be more decisive about their life occupations—a quality that augurs well for would-be leaders and managerial timbre. They themselves chose the college course they plan to pursue.

Likewise, the relationship between performance in the NCEE and the means of support in college was determined by the chi-square test. This yielded a chi-square value of 3,742.59 which, with 32 degrees of freedom, is significant beyond 0.001 level. Examinees who indicated that they would depend largely on their parents for support tended to obtain scores below the 30th percentile (the cut-off score). Those who obtained scores above the 80th percentile seem to bank on scholarship grants. Self-reliance seems to be exhibited by the groups obtaining scores in the 30th to 80th percentile who say they intend to support themselves through college. The results seem to indicate that the upper percentile groups are confident that their high mental ability would qualify them for scholarships and are consequently hopeful that this, coupled with determination, would make pursuit of a college degree possible.

5.3 *The Student Survey and the Sample*

Information regarding the characteristics, attitudes, aspirations, and expectations of students in the country today were gathered through a survey among the post-secondary student population in school year 1977-78 for this study.

Of the total student population of 613,807, 1.48 per cent or 9,105 students responded to a fourteen-page paper-and-pencil questionnaire. Sampling was done using three major criteria: (1) the year level of the student; (2) the region of the location of the school where the student is currently enrolled; and (3) the field of specialization of the student.

Only students in their third or fourth year of post-secondary work were sampled. They are the ones about to enter the labour market and they constitute 40 per cent of the total relevant population.

Since 75 per cent of the students in 1977-78 were studying in schools located in regions I, IV, VI, VII, X and XIII, sample schools were randomly selected only from among these regions. These regions are Ilocos Region, Metro Manila Regions, Western Visayas Region, Central Visayas Region, Northern Mindanao region, and Southern Tagalog Region.

The fields of specialization of students were classified into twelve major types: Agriculture, Commerce and Business Administration; Engineering and Technology; Food, Nutrition and Dietetics; Law and Foreign Service; Humanities; Physical and Biological Sciences; Social Sciences; Medical Sciences; Music and Fine Arts; Teacher Training; and Liberal Arts. Students were sampled among all these fields of specialization in accordance with the distribution in the national level. This was done by taking 40 per cent of each region's enrolment per field of study.

The resulting distribution of the respondents is such that students in higher education are heavily concentrated in schools located in the capital region of Metropolitan Manila. The distribution of absolute and relative frequencies by field of study closely follows that of the national scale. Most of the students are in the Business Administration field unlike in past years when the favourite field of specialization was Teacher Training.

5.4 The Socio-Economic-Educational Background of Students

In terms of basic characteristics, the majority of the students are single, Filipino, and with fathers and mothers who are also of Filipino ethnic origin. There are slightly more female students than male students, 56.6 per cent and 43.4 per cent respectively. The distribution of the ages of students approximates a normal curve clustering at 20.696 with a standard deviation of 2.622. While 24 per cent are eldest children in the family, 57 per cent are in between and 18 per cent are youngest.

A larger number of students pursuing higher education (45%) have Tagalog as their dialect spoken at home. Cebuano speakers constitute 18 per cent of the total sample, Ilocano speakers 14 per cent while all the other dialects constitute the remaining 23 per cent. Note that as per Figure 5.1 the percentage of Cebuano and Ilocano speaking students are reflective of the national profile except for the Tagalog-speaking group which was 45 per cent and way above the national profile of 24.5 per cent. This may be evidence either that more Tagalog speakers are able to attend college or that the wide spread of the national language which was based on Tagalog is gaining greater use in the Filipino home.

Although the students were sampled from schools randomly selected from only six of the total thirteen regions, they actually come from all parts of the country. Each of the thirteen regions is represented: Metro Manila has the largest representation, as expected. Following the capital region in terms of representation are the Ilocos Region and the Southern Tagalog Region. This distribution also presents evidence of the migration that takes place among students in the pursuit of higher education.

In the same way all regions are represented in terms of permanent addresses, so too are all regions represented when respondents were asked the region of the secondary school from which they graduated. Moreover, we note that the two distributions are almost the same. Students usually take up their secondary schooling in the family home region, but migrate to pursue higher learning.

The majority of the students (90%) graduated from general secondary schools. Very few come from barrio high schools and science high schools. Five per cent come from vocational high schools.

Most students came from private high schools. The enrolment ratio of the private sector to the public sector is 66 : 34. Of those graduated from private schools, 62 per cent were from sectarian schools while 38 per cent were from non-sectarian schools. The bulk of these sectarian schools (92%) are Catholic.

Many students among those sampled (62%) had taken the National College Entrance Examination (NCEE) as a pre-requisite to college admission. The others (38%) must have started post-secondary work before 1973 when the NCEE was first instituted. Among those who took the NCEE, the average reported percentile score is 78.322 with a standard deviation of 17.458.

The sample showed that most students (85%) are supported through college by their families. Only 8 per cent are supporting themselves while 6 per cent are on either scholarships or loans. This is evidence of the high regard of Filipino families for their children's education. Very few of the students are working (13%). The average reported monthly income of working student is P. 457.58.

The distribution of respondent students by the type of work and sector of employment of their fathers and mothers is reflected in Tables 5.6 and 5.7. Note that most fathers engage in agricultural type of work while most mothers are housewives. The predominant sector of employment among fathers is also agriculture, fishery and forestry. The average reported gross monthly income of fathers is P 1612.71; while that of mothers is P. 1023.802. The incomes of fathers are generally higher than those of mothers.

A measure of family monthly income was generated by combining the father's, mother's and student's income. The mean of the resulting figures is P. 1945.98. This is much higher when compared with the nationwide per capita income which is P. 3376 (annual) or P. 282 per person per month. Comparing the income level of the students included in HELMS with the national income profile, one notices that only 14.2 per cent of the students come from the lower 72.4 per cent of the families. Students who are pursuing higher education come from families which belong to the top 27.6 per cent (for details, see graph).

The respondent students were likewise distributed by family income level.

5.5 *Main Source of Funds for College Education*

The respondents were asked to indicate the main source of funds for their college education. The categories included were: (a) family, (b) relatives, (c) self-support, (d) government scholarship, (e) university scholarship, (f) non-government scholarship, (g) government loan, (h) non-government loan, (i) other sources. A high percentage (85%) indicated family as their main source of funds, followed by self-support financing (8%).

The main source of funds for tertiary education as related to the region of permanent address of the students was surveyed. A majority of those who indicated family and self-support as means of finance are permanent residents of the Metro Manila region. The other sources of funds appear to be evenly distributed among the thirteen regions. Looking more closely at each region, family accounts for at least 75 per cent of the student's support in all regions. This may be expected since parents may wish to further their children's education even if government and non-government scholarships and loans are difficult to obtain. Essentially the same distribution of sources of finance were found among the six regions (I, IV, VI, VII, X, XII) wherein the schools of responding students are located. The various sources of funds other than family support for tertiary education tend to be widely distributed among students attending colleges in the Metro-Manila Region.

An indication of the relationship between the respondent's field of study and source of funds was also surveyed. When combined students in social sciences, medical sciences, and teacher training receive 32 per cent of family support reported; it appears that families support 85.4 per cent of the students in social sciences, 89.9 per cent of the students in the medical sciences, and 75.6 per cent of the students in teacher training. Government and non-government scholarships and loans support students in medical sciences and teacher training. Support by the students' families is weighted towards medical sciences; followed by music/fine arts, social sciences, liberal arts, teacher training, in that order.

It can be seen in Figure 5.2 that there are very significant sex differences in the means of finance. Government and university scholarships, non-government loans, family/relatives and other sources support female students. Most students, however, depend on government loans, non-government scholarships, and self-support funds.

Of those 83 per cent who are supported by their families, 38 per cent speak the Tagalog dialect in their homes as contrasted to 15.1 per cent who speak Cebuano, and 11.3 per cent who speak Ilocanko in their homes. Tagalog-speaking students have a fairly high (31.5-48.4 per cent) distribution over the various categories of finance.

There is a significant relationship between the main source of funds for tertiary education and the region in which students finished their secondary course. Family support remained as the major source of finance. However, a fairly high proportion of the students who obtained funds from varying sources were graduates of high schools. This probably is a reflection of the secondary school background they acquired from their respective high schools in the different regions.

Of the family supported students, 66.88 per cent attended private secondary schools and 33.2 per cent went to the public schools. As expected, government scholarships and loans were sponsoring a larger portion of public secondary school graduates. Further analysis of students from private sectarian high schools[1] showed that graduates from Catholic high schools received college funds from their family/relatives, government and non-government scholarships/loans, other sources, and a number even supported themselves (6.7%). Regardless of the type of secondary school the students attended, family still remained the main source of college funds.

As expected, there is a significant association between the student's employment and the type of tertiary education finance. Of the working students (12.6%), 46.4 per cent of them are self-supported and 44.1 per cent receive family support. On the other hand, of 87.4 per cent non-working students, 88.7 per cent are family-funded. Among paid working students, 57.6 per cent were supporting themselves and 33.7 per cent were financed by their families. A high 77.1 per cent of the unpaid family workers are dependent on their families. A large portion of part-time workers (56.0%) are supported by their families and 73.1 per cent of the full time workers support themselves in college education.

Occupation of the student's father, as associated with the student's major source of finance has been compared. It should be noted that students with fathers in agriculture/fishery constitute the largest group (31.2%) who appear to support themselves[2] or even avail themselves of scholarships and loans for their tertiary education. Family funds remain the student's major source of finance regardless of father's occupation. As might be expected, those students who are being sponsored by their families tend to have mothers who are housewives (54.4%). Among students who are self-supporting—60.8 per cent reported their mothers were housewives. However, in households where mothers work outside the home, some occupations are more indicative of family support: (1) administrative/executive, management; (2) professional/technical; and (3) sales workers.

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[1] 3,716 respondents.

[2] Only 9.6% of all students with fathers in agriculture/fishery responded "self support"; 80.4% reported "family support".

5.6 *Factors Determining the Demand for Higher Education*

When students successfully complete secondary education, they can either opt to leave the educational system and enter the competitive employment market or choose to pursue post-secondary education and training. In the choice of alternatives, several factors intervene. This discussion considers the second alternative: pursuit of post-education and training.

There are four reasons for undertaking post-secondary education:

(a) "to obtain a specific professional qualification,"
(b) "to enjoy scholarship/grants,"
(c) "to study for its own sake," and
(d) "to obtain better employment opportunities (through a post-secondary qualification)."

To evaluate the importance of each of such factors to Filipino students, they were asked to rank these factors.

Earlier studies have hypothesized that while each of these factors influences the demand for higher education, the role of each varies according to the socio-economic background of the student. Considering the family income of the respondent, the factors: "to obtain a specific professional qualification" and "better employment opportunities with a college education", were considered by the majority of respondents (81% and 86.4% respectively) to be extra-important determinants in deciding whether to pursue higher education. "To enjoy scholarship/grants" was of no importance to most of the respondents, which may be a reflection of the limited availability of scholarship and grants. However, perhaps realizing what additional knowledge can do for the personality of an individual, the respondents considered the factor "to study for its own sake" to be important.

When the frequency of ranking for each factor was analyzed by region of permanent address, school region, respondent's field of study, sex, dialect spoken at home, secondary-education history (high school, region, type of high school attended, whether NCEE was taken), present working status, source of funds for college, and occupations and employment sector of both father and mother, the majority of the respondents again considered the factor "attainment of a specific profession" as a very important factor for going to college. However, considering the sex of the student, there were more females (58.2%) who gave more importance to this factor than males (41.8%). Most non-working students (87.7%) considered this factor to be extra-important as compared to the working students (12.3%). This may be an indication that in our present economic environment, many believe that educational qualifications are needed for most jobs. For the student respondents pursuing higher education on non-government loans, all of them (100%) are pursuing higher education "to enter a particular profession". The hypothesis that students avail themselves of loans to further their studies is verified by this finding.

Among the various factors considered, there was a significant relationship between the reason for pursuing higher education "to enter a particular profession" and the following sub-class factors: family income level, permanent address, region of school, respondent's field of study, sex, secondary-educational history (HS region, type of HS attended, if NCEE was taken), source of funds for college, and the occupation and employment sector of the father. "Better employment opportunities with a specific professional degree" and "utilizing scholarship/grants" as reasons for pursuing higher education were found to be significant when controlling for family income level of the respondent. These marked relationships are statistically proven by the high computed *F* statistic which the different reasons for pursuing higher education have when compared with the other sub-class factors.

5.7 Admission Criteria

Entry requirements to higher education vary and are considered differently by the various educational institutions. Just as the schools give different importance to these requirements, so too do the students. To study the amount of consideration given by the students to these different admission criteria, students were asked to rank requirements according to importance.

With regards to the family income level of the respondents, "academic record" was considered to be important or extra-important by 96.4 per cent of the 7,193 student respondents. Similarly, aptitude test results was ranked important or extra-important by most (86.1%). This relatively high importance was indicated by most respondents from the low-income class.[1] Considered next to be an important factor is the interview given by the school to each student entrant (66.8%). The ethnic background of a student, sex, work experience, previous school, and recommendations were not considered to be important factors by a majority of the respondents. (69.4%, 70.8%, 56.9%, 50.8%, and 58.7% respectively.)

The past academic record of students continued to be important or extra-important by most (95% and more) respondents holding constant regional background (as reflected by permanent address), school region, field of study, sex, dialect spoken at home, secondary educational history, present working status, source of funds for college, and the occupations and employment sectors of father and mother.

Although the so-called "palakasan" system[2] exists in many of our institutions, findings show that this practice is not adhered to by the youth of today. Greater importance is given to the intellectual competence of a student than to any other external factor.

Reviewing the standardized mean score of the different admission criteria of interviews, recommendations, ethnic background, sex, work experience and previous school were all considered as unimportant by the students. (2.896; 2.109; 1.816; 1.797; 2.261; and 2.315 respectively; a rank of "not important" was given a weight of 2 points and "extra-important" a weight of 3 points.) Thus, low mean value of each of these factors indicates the low consideration given them by the students.

To further verify the findings, an analysis of variance was done. When considering the admission criteria of aptitude test, only the family income level was found to be highly significantly related to it.

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[1] Those with family incomes below P. 1,500.

[2] "Palakasan system" means that the influence of social connections and personal contacts are given more importance than academic competence in career selection and promotion.

The academic criterion of past academic record was likewise highly affected by permanent address, school region, field of study, sex, secondary school region and type, father's employment and the dialect spoken at home. The relatively high computed *F* statistics of each of the ANOVA tables shows that the criteria mentioned are greatly affected by these sub-class factors.

5.8 Sources of Career Information

The main sources of career information are the school staff, parents, relatives, counsellors, other students, past employment and general information sources. Students' dependence on the different sources of information was analyzed in light of other sub-class factors.

A slight majority of student respondents depend on the school staff for career information (53%) considering the students' economic status, sex and secondary education. Considering the family income of the respondents, 86.7 per cent of the students reported that they depended "reasonably" or "very much" on their parents and relatives for career information. Similarly, dependence on general information sources ("reasonably" or "very much") for career information was given by 80.3 per cent of the students. The evaluation was consistently given by the students of the different groups. However, dependence on past employment and on other students were of no importance to 71.7 per cent and 50.2 per cent (respectively) of the students. Of the respondents 57.1 per cent depended on counsellors "reasonably" or "very much". Although students claim to be more independent, the opinion of their family and relatives still has a great bearing on whatever decisions they make. The Filipino traditions of respect for the family is not yet lost among the Filipino youth.

In finally choosing a particular course, there are a lot of factors that could be taken into account. Family influence plays a very important role in influencing the student's choice of course. A majority of the students (63.1%) related that family influence was important or extra-important to them. Surprisingly, considering the different income levels and the present practice of youth in giving much importance to what their peers may sav 77.1 per cent of the students do not give any importance to what their friends may say in choosing a particular career path. Advice given by career guidance counsellors is not considered to be important by 53.9 per cent of the respondents. However, the employment opportunities that a particular course can offer, considering as well the wide career choice and social prestige it can offer, seems to be a very inviting proposition to most of the respondents (96.1%, 95.9%, and 83.6% respectively). It appears that the majority of students give a great deal of importance to these factors. Not only have our youth become more practical but also highly future-oriented.

5.9 *The Role of Career Guidance in the Choice of an Educational Career*

The proper choice of the field of study by students as a function of the demands of society, the labour market, their personal capabilities, aptitudes and interests is of great importance not only for the individual concerned but for the future of the country as well. Therefore, the importance of having sources of adequate and authentic advice on career information cannot be overemphasized. The present study has analyzed the extent and reliability of the advice received by students with regard to their choice of a particular field of study.

With reference to the region of permanent address, 55.3 per cent of the students felt that the advice they received was satisfactory enough; 40 per cent were very satisfied and only 4.7 per cent were not satisfied with the advice they received. With regards to the other subclass factors considered school region, respondents' field of study, sex, dialect spoken at home, secondary educational history, present working status, source of funds for college, work and employment sector of father and mother, and the family income level, the student respondents were all consistent (within 5%) in their opinion as to the advice they received with regards to the choice of a course.

To further verify findings, an analysis of variance was done together with a regression analysis of the factor "advice received in choosing a course" with the other sub-class factors. Results of the various ANOVA tables point out that the factors that were significant with this career guidance factor are the respondents' permanent address, school region, field of study, secondary education history and the source of funds for college. This implies that there is a high degree of association between the student respondents' degee of satisfaction with the advice received and the aforementioned subclass factors. At the 1 per cent confidence level, the computed *F* statistics of these factors were greater than tabulated *F* statistics. Surprisingly, there was only minimal difference between the sexes with respect to the degree of importance given to the advice received.

5.10 Attitude Towards Present Course

Whether present course was really wanted

The pursuance of a particular course is the result of the interplay of a number of factors. Considering the respondent's personal feelings about present course, most of the students (81.8%) were pursuing a course they truly wanted. For the 18.2 per cent who were pursuing a course not really desired by them, 39.6 per cent of them were in the field of commerce and business administration. Analysing this sentiment by sexes, 79.6 per cent of the female respondents were pursuing a course they really wanted compared to 84.8 per cent of the male respondents. For those not pursuing a course they really wanted, many of them had farmers and fisherman fathers (23.9%) and housewife mothers (54%). Considering the family income level of the respondents, 81.6 percent of the respondents were pursuing the course of their own liking.

Whether they would change present field of study

When the respondents were asked whether they would want to change their field of study if more information were made available, of the 400 respondents to this question 69.3 per cent answered "yes". This is quite unexpected since majority of the respondents were pursuing a course they really wanted. However, this desire for change brought about by added educational and career information can be an indication that these students are really not satisfied with the career information they've had. This can also be an indication that the student's sources of information are quite limited.

5.11 Degree of Course Satisfaction with Regard to Meeting Career Objectives

Findings reveal that students pursue higher education so as to be able to enter a specific career path. Seventy-three per cent or 6359 student respondents are very much satisfied with their course. More female respondents (74.4%) than male (71.2%) were satisfied with the correspondence of their present course and their career objectives. Only 1.8 per cent are dissatisfied with their present field of study.

Degree of course satisfaction with regard to meeting personal interests

The question of satisfaction involves many factors. The major contributing factors are subjective in nature. Satisfaction depends on the dimension of aspiration and the degree of disillusionment that follows.

When the students were asked to assess their present course in connection with meeting their personal interest, 60 per cent of them were very much satisfied with their course. Again, only a very small portion of the sample (4.3%) felt that their present course did not meet their personal interest.

5.12 Reasons for Being Unable to Choose the Desired Educational Career

A gap often exists between desire and achievements. Not all students are able to pursue the course which leads to their desired profession. Among the deterring factors are: lack of financing, family preference, admission requirements, academic records, and other personal reasons.

Among those who were not taking the course they really wanted, "lack of financing" was given as the reason by 61.6 per cent. A further analysis by sex shows that 62.5 per cent of the males and 51.1 per cent of the females consider this an important reason. By family income level 48.5 per cent of those who come from low income families (monthly family income of less than P. 50 to P. 1,499) could not take the courses leading to their desired professions. Those who regard "lack of financing" as a very important reason are those who are pursuing higher education on government loans, non-government scholarships, and those receiving support from relatives other than family.

Sixty-one per cent of the students who are not taking courses toward their desired profession responded that it was due to family preferences and 44.2 per cent said it was because of past academic performance.

5.13 Present Working Status

Of the students sampled, 87.3 per cent or 7,857 are not working.[1] 33.4 per cent give Metro Manila as their permanent region. Of those students who are working 41.2 per cent are in the field of business/commerce. More of the male students work (15.8%) than do female students (10.1%).

Of the 1,120 working students who responded, 60.4 per cent are paid employees while 18.9 per cent are unpaid family workers. Surprisingly, a significant number of respondents (16.7%) are employers. Full-time and part-time working students are about equal in proportion, 41.3 per cent and 41.8 per cent respectively. Of the working students 16.4 per cent have fathers who are farmers and fishermen. Majority of the respondents (58.5%) report that their mothers are housewives.

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1. Because night students were not included in this study's sample there may be an over-statement of the proportion of student population who are not working.

Annex I
MALACANANG
Manila

PRESIDENTIAL DECREE NO. 146

Upgrading the Quality of Education in the Philippines by Requiring all High School Graduates Seeking Admission to Post-Secondary Degree Programmes Necessitating a Minimum of Four Years' Study to Pass a National Entrance Examination and Appropriating Funds Therefore.

I, FERDINAND E. MARCOS, President of the Philippines, by virtue of the power vested in me by the Constitution as Commander-in-Chief of all the Armed Forces of the Philippines and pursuant to Proclamation No. 1081 dated September 21, 1972, and General Order No. 1 dated September 22, 1971, do hereby decree, order and make as part of the law of the land the following measure.

SEC. 1. *Declaration of Policy.* Pursuant to Presidential Decree No. 6-4, it is hereby declared a policy of the State to maintain the highest quality of education for purposes of national development. To achieve this policy, all high school graduates shall be required to pass a national entrance examination as a pre-requisite for admission to any post-secondary academic or professional degree programme necessitating a minimum of four years' study in any private or public institution of higher learning, whether chartered or unchartered.

SEC. 2. *Powers and Duties of the Secretary.* To carry out the aforementioned policy, the Secretary of Education and Culture has the authority:

1. To promote and conduct or cause to be conducted national entrance examination in accordance with this Decree;

2. To determine the method, form, content, date and place or places of examination;
3. To enter, when desirable or necessary, into agreements or contracts, and to make payments incidental to such agreements or contracts, with qualified persons, institutions, organizations, public agencies, entities and establishments to carry out the purposes of this Decree;
4. To determine exemptions from the provisions of this Decree;
5. To charge a reasonable fee to cover the cost of examinations.

SEC. 3. *Rules and Regulations*. The Secretary of Education and Culture shall within sixty days from the issuance of this Decree, promulgate such rules and regulations as may be necessary to implement the provisions of this Decree: *Provided*, That the full implementation the programme be held for entering freshmen of the school year 1974-75. These rules and regulations shall take effect fifteen days after their publication in the *Official Gazette* or in one newspaper of national circulation.

SEC. 4. *Appropriation*. To carry out the provisions of this Decree, the sum of one million pesos is hereby annually appropriated as part of the appropriation of the Department of Education and Culture out of any funds in the national treasury not otherwise appropriated.

SEC. 5. *Effectivity*. This Decree shall take effect immediately.

Done in the City of Manila, this 9th day of March, in the year of our Lord, nineteen hundred and seventy-three.

(SGD.) FERDINAND E. MARCOS
President
Republic of the Philippines

By the President:

(SGD.) ALEJANDRO MALCHOR
Executive Secretary

Table 5.1 *Means and Standard Deviations of Standard Scores Obtained by Examinees in the Various Areas of the 1975 NCEE, by Sex, and t values for Significance of Differences between the Means*

Sex		*Reasoning Ability*		*Mathematical Ability*		*Verbal Ability*		*Reading Comprehension*		*GSA*	
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Male	185,029	501.81	92.91	507.53	99.60	489.48	89.00	505.84	89.97	501.29	84.17
Female	207,687	493.99	88.24	497.65	95.50	506.63	92.98	519.63	87.00	504.60	82.99
Total	392,716	497.67	90.22	502.30	97.58	498.55	91.53	513.13	88.68	503.04	83.57
	t value	0.3008		0.3253		−0.6458		−0.5520		−0.1485	

Table 5.2 *Means and SDs of Standard Scores in the Various Areas of the 1975 NCEE by Region*

Region	*Number*	*Areas*									
		Reasoning Ability		*Mathematical Ability*		*Verbal Ability*		*Reading Comprehension*		*GSA*	
		Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Ilocos Region	4,178	491.80	86.50	497.22	93.40	487.64	85.33	497.50	81.03	493.54	78.17
Cagayan Valley	1,738	468.87	83.81	473.71	85.08	477.16	79.95	477.36	72.78	474.28	71.18
Central Luzon	4,646	487.28	85.21	497.96	92.20	483.44	82.62	502.77	84.23	492.85	77.47
Southern Tagalog	13,195	533.81	94.57	534.48	110.58	524.83	106.13	546.12	99.30	534.81	94.62
Bicol Region	2,119	511.17	87.95	512.49	98.31	513.05	92.79	523.53	88.49	515.05	83.72
Western Visayas	4,123	489.04	86.75	490.59	91.58	484.05	87.20	502.35	84.83	491.50	79.55
Central Visayas	2,336	514.37	85.18	523.93	92.60	519.68	88.09	524.74	82.58	520.67	78.13
Eastern Visayas	1,587	472.35	83.76	467.59	83.52	473.54	79.73	486.56	77.13	474.99	72.35
Western Mindanao	1,199	473.37	87.96	482.95	90.30	484.21	88.03	493.37	84.81	483.47	79.75
Northern Mindanao	1,327	479.33	83.58	481.85	88.91	485.58	79.31	500.46	79.29	486.82	74.45
Southern Mindanao	2,957	494.89	82.35	498.73	88.39	494.87	82.63	508.93	80.87	499.35	74.71
Central Mindanao	2,116	474.82	84.53	481.54	86.03	484.86	78.22	491.30	79.81	483.11	73.96
Total Country	41,521	503.35	91.41	507.05	99.98	500.96	93.87	516.09	90.85	506.86	85.89

Table 5.3 *Means and SDs of Standard Scores Obtained by Student–Examinees in the Various Areas of the 1975 NCEE, by Age Group*

Age	*N*		*Reasoning Ability*	*Mathematical Ability*	*Verbal Ability*	*Reading Comprehension*	*GSA*
14 and below	3,716	*M*	514.77	517.38	512.57	520.81	516.53
		SD	92.32	100.35	97.32	88.73	86.40
15–16	211,802	*M*	499.25	498.39	499.07	506.97	501.05
		SD	88.19	93.18	86.59	82.72	79.21
17–18	113,394	*M*	455.47	461.52	462.74	471.22	462.86
		SD	73.33	76.97	67.79	68.25	61.91
19 and above	65,692	*M*	450.64	465.24	470.42	475.98	465.69
		SD	71.22	76.11	71.80	71.92	62.53

Table 5.4 *Contingency Table on the Relationship Between Examinees' Performance in the 1975 NCEE and Family Income Group*

Family Income Group	*Percentile Grouping*									
	20 & Below	*21–29*	*30–40*	*41–50*	*51–60*	*61–70*	*71–80*	*81–90*	*91–99*	*Total Obs.*
Below P. 250	(23916) 33407	(11158) 14071	(13130) 15436	(11211) 12091	(11287) 11299	(11359) 10099	(11028) 8219	(10617) 5860	(8774) 1999	112481
P. 250–499	(22154) 21928	(10336) 10625	(12163) 12853	(10385) 11185	(10456) 11278	(10522) 11378	(10216) 10694	(9834) 9325	(8128) 4927	104193
P. 500–749	(15302) 13340	(7139) 6719	(8402) 8185	(7173) 7399	(7222) 7522	(7268) 7936	(7056) 7879	(6793) 7711	(5614) 5278	71969
P. 750–999	(7243) 5256	(3379) 2801	(3977) 3457	(3395) 3107	(3419) 3469	(3440) 3735	(3340) 4110	(3215) 4350	(2658) 3782	34067
P. 1000–1249	(6394) 4369	(2983) 2252	(3511) 2734	(2997) 2470	(3018) 2709	(3037) 2980	(2949) 3466	(2839) 4276	(2346) 4818	30074
P. 1250 & Above	(5939) 2649	(2771) 1298	(3260) 1777	(2784) 1694	(2803) 1927	(2820) 2318	(2738) 2960	(2636) 4412	(2179) 8895	27930
Total	80949	37766	44442	37946	38204	38446	37328	35934	29699	380714

Chi–Square = 47721.94 df = 40 $p < .001$

Note : Figures in parentheses are expected frequencies; figures without parentheses are observed frequencies.

Table 5.5 *Contingency Table Showing Relationship Between Examinees' Performance in the 1975 NCEE and Their Course Preferences*

Course Preference	*Percentile Grouping*								
	20 & Below	*21–29*	*30–40*	*41–50*	*51–60*	*61–70*	*71–80*	*81–90*	*91–99+*
Arts & Culture Occupation	(2,585) 2,590	(1,215) 1,109	(1,430) 1,194	(1,220) 1,074	(1,231) 1,111	(1,237) 1,111	(1,199) 1,126	(1,155) 1,257	(951) 1,656
Agriculture and Fishing Occupation	(6,344) 8,815	(2,982) 3,564	(3,509) 3,850	(2,995) 3,100	(3,022) 2,906	(3,035) 2,582	(2,941) 2,261	(2,835) 1,844	(2,334) 1,080
Health, Nat. & Phy. Science	(19,128) 14,912	(8,991) 8,281	(10,582) 9,869	(9,030) 9,083	(9,113) 9,307	(9,152) 9,580	(8,869) 9,818	(8,548) 10,327	(7,037) 9,278
Business, Clerical Public Services	(21,183) 20,569	(9,957) 10,008	(11,719) 12,113	(10,000) 10,065	(10,092) 10,294	(10,136) 10,552	(9,823) 10,091	(9,467) 9,433	(7,793) 7,050
Technical Engr., Soc. Sc.	(15,189) 12,068	(7,140) 5,696	(8,403) 7,339	(7,170) 6,717	(7,236) 7,240	(7,268) 7,790	(7,043) 8,212	(6,783) 8,731	(5,588) 8,036
Personal Services, Domestic Skills	(1,331) 2,512	(625) 918	(736) 867	(628) 609	(634) 486	(637) 409	(617) 282	(595) 168	(489) 45
Religious Occ.	(796) 714	(374) 318	(440)	(376) 358	(379) 351	(381) 398	(369) 400	(356) 474	(293) 354
Still do not know	(15,827) 20,208	(7,440) 8,834	(8,756) 9,947	(7,472) 7,888	(7,541) 7,558	(7,573) 7,000	(7,339) 5,010	(7,073) 4,586	(5,823) 2,812

Chi–Square = 14386.776 df = 56 $p < .001$

Note : Figures in parentheses are expected frequencies; figures without parentheses are observed frequencies.

Table 5.6 *Distribution of Respondent Students by Work of Father, 1977*

Work of Father	*Absolute Frequency*	*Relative Frequency (Per cent)*
Professional or Technical	1293	14.2
Administrative, Executive or Managerial	1141	12.5
Clerical	485	5.3
Sales	1074	11.8
Service	300	3.3
Agricultural	1780	19.5
Production or Transport	1123	12.3
Armed Forces	358	3.9
Unspecified	1551	17.0
Total	**9105**	**100.0**

Table 5.7 *Distribution of Respondent Students by Work of Mother*

Work of Mother	*Absolute Frequency*	*Relative Frequency (Per cent)*
Professional or Technical	1173	12.9
Administrative, Executive or Managerial	379	4.2
Clerical	190	2.1
Sales	1024	11.2
Service	119	1.3
Agricultural	218	2.4
Production or Transport	359	3.9
Armed Forces	1	0.0
Housewife	4337	47.6
Unspecified	1305	14.3
Total	**9105**	**100.0**

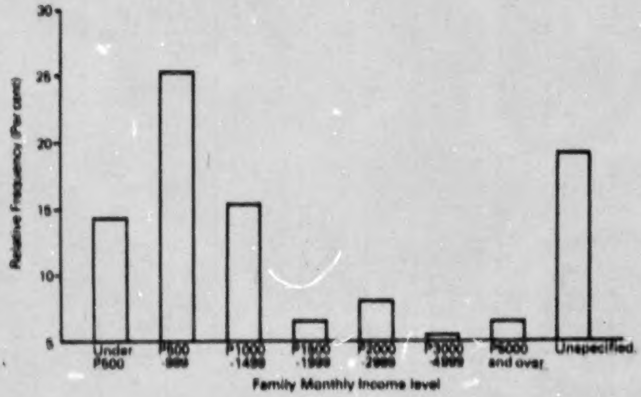

Figure 5.1 Distribution of Respondent Students by Family Monthly Income Level

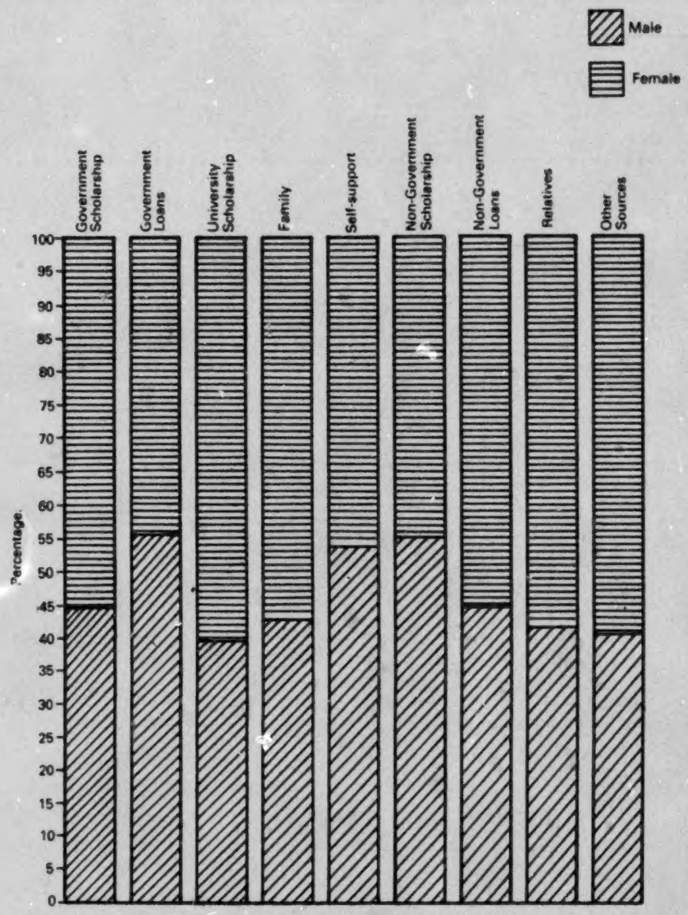

Figure 5.2 Source of Funds for College by Sex

Chapter 6

Employee's Perception of Employment Process and the Higher Education System[1]

6.1 Introduction

6.1.1 OBJECTIVES

It is desirable to have a smooth transition of graduates from the school system to the labour force. For this purpose, the government, policy makers and educational planners must develop plans, organizational structures and other means to effect an efficient transition and an agreeable adjustment from school to work. Because the type, nature and process of employment are affected by the type and level of education attained this section focuses on the employee's perception of the employment process and the higher education system. This section has five objectives. *First,* it seeks to analyze the factors that affect the movement of graduates from higher education into the labour market. *Second,* it seeks to assess the relevance of the education and training of the graduates to their jobs. *Third,* it seeks to diagnose the nature of job mobility and the degree of job satisfaction as well as pinpoint those elements that make employees satisfied with their job. *Fourth,* it seeks to relate earnings of graduates to various determinants of earnings such as quality and level of education, and nature and importance of training outside of the school. And *fifth,* it seeks to suggest policies and implications for planning so as to minimize mismatch between the manpower supplied by the educational system and the kind demanded by the industry.

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[1] Contribution from staff of FAPE.

6.1.2. NATURE OF THE SAMPLE

The sample of employed graduates is closely tied with the sampling of the employers. As will also be discussed in Chapter 7, the employers were selected on the basis of the number of employees across industrial classifications and regions throughout the Philippines. Thus, employed graduates were all chosen from the sampled employers. They were selected at random from among employees who have completed either a post-secondary programme or a collegiate programme.

For firms with less than 200 employed graduates, a 10 per cent sample was taken and for firms with 200 or more—5 per cent. A systematic sampling with a random start was used in drawing the sample respondents. The total of valid filled-in questionnaries reached 4655. Of the total 4655, 4376 had completed collegiate degree and 279 came from post-secondary, non-collegiate courses.

6.1.3 CHARACTERISTICS OF THE EMPLOYED GRADUATES

The ratio of male to female is 49.85 per cent to 50.15 per cent. A majority of the total sample (56.5%) are married; 68.2 per cent of the men and 53.6 per cent of the women.

The median age of the employed graduates is 30-34 with a mode of 25-29. The biggest concentration (66.2%) is in the 20-34 age bracket. Those below 19 and above 65 are negligible at only 0.4 per cent for both. Of those who responded they were married, 53.4 per cent of their spouses were in the 20-34 age bracket and 82.5 per cent were 20-44.

While 32.5 per cent of the employed graduates live in the Metro Manila Region IV Area, however, the majority (67.5%) come from outside the Metro Manila and Region IV Areas. The others with sizeable shares are: Regions VII, XI, X and III with 11.4 per cent, 10.3 per cent, 8 per cent and 7.5 per cent respectively. The rest are thinly distributed across Regions I, II, V, VI, VIII, IX, XII and XIII.

Almost all (99.4%) of the employed graduates in the sample are Philipino citizens; 92.1 per cent have at least one parent who is Filipino.

The language spoken in early childhood has been Tagalog 30.0 per cent, Cebuano 28 per cent, Iloco 7 per cent, Bicol 6 per cent (see Table 6a). The number of Tagalog-speaking Filipinos is increasing.

As shown in Chapter 5, 45 per cent of the currently enrolled students speak Tagalog, whereas of the employed graduates who were students between 1957 and 1975, only 30 per cent speak Tagalog. Assuming a common language is a factor favouring national solidarity, this increase is a healthy sign.

There are more employed graduates who are the oldest (27.88%) child in the family than the youngest (14.49%); 56.8 per cent reported themselves as in-between.

Of the total sample, 4,376[1] have completed a collegiate course. The rest are high school graduates who have finished vocational/technical courses that are not of collegiate level.

Of those who reported having a degree, 72.12 per cent finished their degrees between 1961 and 1975. Only 16.22 per cent earned their degrees before 1961; 11.66 per cent completed their degrees after 1975. Many of the graduates have achieved some form of honours while in school but the percentage of those with honours declines at the higher educational level: 24.11 per cent have honours in elementary, 18.36 per cent in high school, and only 6.6 per cent have attained honours in college.

The spouses of the employed graduates are also highly educated: 80.06 per cent had completed a collegiate degree. Both the father and the mother have attended school: among the fathers, 30.9 per cent finished college, 26.6 per cent finished high school and 29.3 per cent finished elementary; among the mothers, on the other hand, 19.3 per cent finished college, 27.8 per cent finished high school and 37.8 per cent finished elementary.

The distribution of colleges and universities where the employed graduates finished their degree reflects the mix of enrolments between the state and private colleges and universities. The share of the state colleges and universities in enrolment in 15 per cent. Of the employed graduates 12.6 per cent came from this sector; while private higher education accounts for 87.14 per cent. Private higher education can further be categorized into sectarian (35.32%), proprietory (55.03%) and foundation (1.3%).

The employed graduates were grouped into occupational classification, viz.: professional and technical workers; administrative, executive and managerial workers; clerical and related workers; sales; service; agricultural; production; transport and labourers; and members of the armed forces. The professional and technical workers (42.67%) and clerical and related workers (37.04%) comprise the largest groups. Production, transport and labourers accounted for 9.29 per cent; administrative, executive and managerial workers, 5.95 per cent; service workers, 2.10 per cent and sales workers, 1.75 per cent. The study focussed on employed graduates in companies of single proprietorship, partnership and corporate nature. Because by the very nature of agriculture, i.e., demanding fewer college graduates, it is understandable that the agricultural workers represent only 0.70 per cent. The armed forces account for the smallest at 0.50 per cent (see Table 6.1).

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[1] This includes 706 respondents who have completed vocational courses.

As to industrial classification, the largest group is employed in community, social and personal services, 47.8 per cent; followed by manufacturing, 13.1 per cent; and mining and quarrying, 12.5 per cent. Financing, insurance and real estate account for 6.2 per cent electricity, gas and water account for 5.8 per cent while transport storage and communication account for 4.5 per cent. (See Table 6.2).

The occupation and industrial classification of spouse is similar to the pattern of the respondents with the exception that 22.5 per cent reported their spouses as "housewives" and 1 per cent (27) reported that their husbands did not work. As to the industrial classification of the father, the biggest group comes from the agricultural sector followed by professional, technical workers, production, transport workers. While the clerical and related workers account for 37.04 per cent of the employed graduates, there are only 6.60 per cent of the fathers who belong to this group (see Table 6.3). As to industrial classification of the mother, 68 per cent reported them housewives followed by the professional, technical workers (10.1%). There are more sales workers among the fathers than among the mothers, spouses of the employed graduates.

6.2 Mobility within the Education System and from Education to Jobs

6.2.1 FACTORS DETERMINING PURSUIT OF HIGHER EDUCATION

In terms of indicators such as enrolment in tertiary education per 100,000 population, the Philippines rank fourth and among the highest educated countries in the world. There is a substantial demand for education in the Philippines. The findings of the Ranis Mission[1] indicate that education has been a channel for intergenerational mobility in the Philippines and further substantiate the desirability of education.

The findings of the present study identify reasons for pursuing higher education. An overwhelming 56.21 per cent of the respondents indicated "good employment opportunities" as the critical factor that prompted them to choose a particular course. A large percentage (28.90%) stated "the possibility for a wide choice of future career" as a critical factor. The other factors, such as social prestige, accounted for only 4.45 per cent; family influence, 5.49 per cent; and friends, 1.49 per cent. All other factors are negligible.

6.2.2 POSSIBLE REASON FOR CHANGES IN THE FIELD OF SPECIALIZATION

To analyze the possible reasons for changing the field of specialization, one should look first at the question of whether the employed graduates have completed the course they originally really wanted to take.

To this question, 68.26 per cent responded positively, thus leaving only 31.74 per cent who wanted to pursue a course but, for reasons that will be analyzed further below, had not done so. With this answer, the possibility for course shifting is narrowed down to 31.74 per cent of the sample. This minority group might have shifted course specialization had it been possible to overcome the factors they identified as being the reasons for not having chosen the course they really wanted.

Lack of financing and parental influence were suggested as the strong reasons for not having chosen the course they most preferred. A majority (52.05%) singled out lack of financing as a deterrent for not pursuing the chosen field of specialization followed by parental influence (29.42%). This is quite understandable since 92.5 per cent of the employed graduates depended not only on themselves but also on their families for funding their education. In other words, some 15 per cent of the total sample were prevented, by lack of finances, from choosing the course of studies preferred; another 9 per cent were dissuaded by parental influence.

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[1] International Labour Office, *Sharing in Development: A Programme of Employment, Equity and Growth for the Philippines*, Geneva: International Labour Office, 1974.

6.2.3 SPECIALIZATION AND ACTUAL OCCUPATION

For the purpose of the study, occupations were aggregated as per standard occupational classification into the following:

(a) professional and technical workers
(b) administrative, executive and managerial workers
(c) clerical and related workers
(d) sales workers
(e) service workers
(f) agricultural workers
(g) production, transport and labourers
(h) armed forces.

To analyze the relationship between field of specialization and specific occupation, one has to look into the course completed by those occupying positions in various occupations. The analysis showed that those who specialized in commerce or business administration adapted themselves to all eight occupation classifications. It ranks either first or second in each occupational grouping. Graduates of teacher training institutions also rank high—either first, second or third. Engineering and technology graduates fit into certain specialized occupations such as production, transport and labourers where they ranked first. Many of the engineering graduates occupy administrative and managerial positions; they ranked second to commerce in this particular occupation. In other occupations, such as professional and technical workers, sales and the armed forces, the engineers ranked fourth, third and fifth respectively. Graduates of professional courses such as medical sciences fit into service and professional and technical occupations whereas graduates of other professional degrees, such as law and foreign service, fit into administrative and managerial positions, service workers, armed forces, sales and clerical force. However, graduates of liberal arts, and humanities are not flexible enough in fitting themselves into various occupations. They fit into administrative and managerial positions, sales clerical, agriculture, armed forces and service work. Agriculture, as a highly specialized degree, fits into equally specialized occupations such as agriculture, where it ranks number one, production, transport and labourers, service and professional and technical workers. Graduates of the physical and biological sciences, music and fine arts, food and nutrition are thinly scattered among the occupations. (See Table 6.4.)

Two factors make a certain course of specialization very flexible in meeting the requirements of various occupations: (i) the very nature of the course which allows for greater diversity in meeting work complexity, and (ii) the excess supply of graduates of certain courses, vis-à-vis the shortage in some curricular programmes, which requires substitution. The excess supply hypothesis probably explains the flexibility of commerce graduates. However, liberal arts graduates, who are almost as many as the commerce graduates, do not fit into many occupations when, by the very nature of the course, they ought to be more flexible in meeting job requirements. This undermines the contention that the excess supply of commerce graduates leads to wide distribution across occupations.

6.2.4 OCCUPATION AND TYPE OF SCHOOL

Tertiary education in the Philippines is divided into state colleges and universities, on the one hand, and private higher education on the other. The state colleges and universities are further divided into:

1. University of the Philippines (UP) System
2. Other state-chartered colleges and universities
3. Teacher-training Institutions
4. Agricultural colleges
5. Arts and trade schools

The private higher education is sub-divided into:

1. Sectarian Institutions
   1.1 Catholic
   1.2 Protestants
2. Non-Sectarian Institutions
   2.1 Proprietary
   2.2 Foundation

This section of the study examines how the graduates of these types of institutions fit into various occupational classifications. The premier university in the Philippines, i.e., the UP, is able to fit most of its graduates into the two highest-salaried major occupations, i.e., professional and technical and administrative and managerial positions. The performance of the graduates of various types of schools occupying both the professional and technical position and administrative and managerial position is shown by the following:

Institutions by % of graduates placed	*% of graduates employed in professional/technical and administrative/managerial positions*
1. UP System	78.8
2. Protestants Sectarian	71.7
3. State Arts and Trade Schools	71.0
4. State Teacher-Training Institutions	66.3
5. Foundation	63.3
6. State Agricultural Schools	59.0
7. Other State College and Universities	46.4
8. Proprietary	44.9
9. Catholic Schools	44.5

In terms of the number of graduates that fill the various occupations, private higher education, because of its greater enrolment of between 65 and 92 per cent of those in tertiary education, has supplied the most. However, among the professional and technical workers, private higher education provides less than its share. State higher education supplied 17.1 per cent of the professional/technical workers. In other occupations such as clerical, sales, service and production, transport and labourers, private higher education supplied more or less proportionate to its share. On the other hand, state higher education contributed more in proportionate share in administrative and managerial job, agriculture and the armed forces.

6.2.5 JOB WAITING PERIOD

Many of the employed graduates had worked prior to completion of their degree. Up to 22.04 per cent were working students. For them, job placement was less of a problem than for those who looked for a job after graduation; the waiting period ranges from less than a month to more than two years.

The waiting period has been categorized into two sequences: (i) after finishing the course; and (ii) after actively looking for work. The average waiting time under the first category is 5-6 months and for the latter, 3-4 months. After actively looking for work for 3-4 months, 54.6 per cent were employed. After six months, 76.9 per cent had found employment, and after one year, 88.8 per cent. Graduates who waited for more than one year but less than two years represent 7.1 per cent of the total while 4.1 per cent waited for more than two years (see Table 6.5).

Waiting period varies with the type of school. The average waiting period for graduates of the UP and state higher education is 3-4 months while for all private higher education, 5-6 months. As to the percentage of employed after six months, 79.8 per cent of the graduates of UP were employed while 61.8 per cent of the graduates of private proprietary institutions were employed. After one year, 93.7 per cent of UP graduates were employed as against the proprietary institutions 80.3 per cent. A large percentage (as high as 8.3%) of the graduates of proprietary and other private school remained jobless after two years.

After analyzing the length of the waiting period, one has to look for possible explanations for such long waiting periods. From the 2194 respondents, the following reasons emerged: for those who waited for a month or two, low salary offer was the predominant factor (29.2%) followed by the lack of job opportunities (25.3%) and lack of opportunity for advancement (20.9%). Other factors such as lack of eligibility, marriage and being underage were not very critical. As the waiting period lengthened, the lack of job opportunities looms as the greater factor while low salary factor diminishes. The lack of job opportunities increased to 43 per cent after two years of waiting. This implies, therefore, that probably either those who waited for more than a year are unemployables or that there are no job opportunities.

Relating the reasons for the delay in finding employment and the type of school, it is noticeable that UP graduates demand higher starting pay than the graduates of other institutions. On the other hand, lack of opportunity for advancement is a high priority for the graduates of arts and trade schools, other state colleges and universities and Catholic schools while lack of job opportunities is of paramount importance to the graduates of teacher-training institutions, foundations, sectarian institutions, agricultural colleges and the arts and trade schools. Again, other factors such as marriage, eligibility requirements and being underage have not been very significant.

6.3 Role of Guidance in the Choice of Educational and Occupational Career

6.3.1 DEGREE OF AVAILABILITY OF GUIDANCE AND ITS ADEQUACY

Guidance in the choice of the educational and occupational career has been limited. In many instances, contact with the guidance counsellor, especially in high school, is often construed in the negative sense. In many instances, problem students are generally closely monitored by guidance counsellors, thus dissuading those who have positive attitude towards the guidance counsellors from availing themselves of their services.

On the other hand, there are few counsellors at both the high school and the college level. In some cases, career and educational guidance has not been as professionalized as expected. However, the evolution of FAPE's aptitude classifying test and the diagnostic tests, coupled with the scholarship programme in guidance and counselling, has provided for greater optimism for the development of more professional guidance in schools.

6.3.2 METHOD OF EMPLOYMENT: THE INSTITUTIONAL MECHANISM AND ITS ROLE

Approaches to finding employment could be categorized into: (a) school placement offices, (b) government placement offices, (c) friends and relatives, (d) teacher's/instructor's recommendation and (e) company placement office. In the experience of the employed graduates, they found friend's/relative's recommendations of paramount importance followed by company placement offices.

The following table reveals the overall ranking:

	Rank
1. Friends/Relatives Recommendation	1
2. Company Personnel Office	2
3. Teacher's/Instructor's Recommendation	3

4. School Placement Office	4
5. Government Placement Office	5
6. Media Advertisement	6
7. Others	7

(For details, see Table 6.5a)

In evaluating the effectiveness of the above-mentioned approaches to finding employment, the role of personal relationships and its importance in the Philippine society would explain the greater role of friends, relatives and teachers in job placement. There is a need to provide greater acceptance of, confidence in the development of institutionalized job placement mechanisms. For instance, school placement offices have not been widespread and government placement offices have yet to gain public confidence. In many ways, teacher's/instructor's recommendations are taking the place of school placement programmes while relative's/friend's recommendations facilitate this task within the context of Philippine values.

As to the preference of the graduates of various types of schools, the graduates of UP and the arts and trade schools found the help of their instructors/teachers quite effective. Those from agricultural schools, teacher-training institutions and protestant schools considered the school placement office as an effective source of assistance. Graduates of proprietary schools, Catholic and foundation schools found relatives and friends to be effective sources of help. Only the graduates of other state colleges and universities have expressed strong preference for company placement office.

6.4 *Relevance of the Training Received With Respect to the Needs of the Job*

6.4.1 USEFULNESS OF THE TRAINING

Three variables were used to determine the usefulness of training in getting the present job: (1) educational qualifications, (2) formal training and (3) supplementary training in the form of vocational/technical/craft/in-service training. Many of the respondents (36.2%) have had supplementary training.

6.4.1.1 Formal Training

As to the employed graduates' assessment of their college performance, only 1.60 per cent feel that they were excellent students while 28.15 per cent consider they were above average. The majority (67.63%) claim they were average students. A small percentage (2.53%) report themselves as below average. However, out of the total employed graduates, 6.74 per cent earned honours in college. Thus, the 1.60 per cent of the respondents who rated themselves excellent represents an understatement. On the other aspects of education such as content and method of instruction, 49.2 per cent of the employed graduates feel that the content was adequate, and 48.9 per cent, the method. Those who rate content and method of instruction as very adequate account for 36.75 per cent and 35.18 per cent respectively; excellent content of instruction, 9.26 per cent; and excellent method of instruction, 9.62 per cent. A negligible number expressed dissatisfaction with their college training.

As stated earlier in this paper, the demand for education is motivated by employment prospects. This section of the paper assesses whether education judged as highly satisfactory is indeed necessary in securing a job. A majority (56.94%) consider educational qualification very necessary; 14.52 per cent consider it extra-ordinarily necessary; and 24.66 per cent necessary. A small percentage assert that educational qualifications are barely necessary (2.79%) and not necessary (1.09%). Asked to compare formal versus non-formal training 1615 responded: 36.78 per cent contend that formal training is more important than non-formal and 43.96 per cent feel that formal training is equally as useful as non-formal training. Those who place greater emphasis on educational qualifications and formal training include professional and technical workers, clerical and related workers, production and transport workers. In terms of industrial classification, the employed graduates in community, social and personal service, manufacturing and mining and quarrying put a relatively greater significance on educational qualifications and formal training.

Furthermore, the graduates of proprietary institutions, Catholic schools, the UP system and the other state colleges and universities put more importance on educational qualifications and formal training. In none of the above comparisons was non-formal training ranked first or second.

6.4.1.2 NON-FORMAL TRAINING

Non-formal training is a very important supplement to formal training. Most often it is pursued to provide added skills to conform with the job requirements. Respondents in this study consider the non-formal training: very necessary (52.2%), necessary (19.5%) and extra-ordinarily necessary (16.6%). Of the total 1704 respondents, only 2.3 per cent judge it unnecessary and 5.2 per cent barely necessary. The evaluation of non-formal education is distinct from formal education in two ways. One, there were (in the sub-sample of 1704) more who feel that non-formal training is not necessary or barely necessary compared to the assessment of formal training. Two, while there are 34.9 per cent who judge formal training as more useful than non-formal training, only 13.8 per cent consider non-formal education as more useful than formal.

As to the significance of non-formal education across occupations, industrial classification and school type, the pattern seems to follow the evaluative patterns of the formal schooling.

In light of the above analysis of non-formal education, it is quite clear that formal education still prevails over non-formal education. Non-formal education still remains as supplementary to formal education and the evidence on hand questions the contention that non-formal education could be a substitute of formal schooling.

6.4.2 SUGGESTED WAYS OF MAKING EDUCATION MORE RELEVANT TO OCCUPATION

Respondents were asked to suggest ways of making education more relevant to occupation. Many (25.1%) express strong preference for formal education programmes interrupted with work-related programmes, 18.3 per cent for formal education programmes interspersed with work-related experience and 17.9 per cent for educational programmes completely seperated from work-related programmes. This preference points to the need for further research on the possibilities of incorporating into the formal education curriculum work-related experiences to make education more relevant to occupation.

6.5 Mobility Within the Job

6.5.1 EXPECTATIONS ABOUT THE CHARACTERISTICS OF A JOB

Many factors affect one's satisfaction with the job. The variables used to gauge employees' satisfaction are as follows:

1. Able to utilize talents
2. Scholarship opportunities
3. Good income
4. Good prospects for career advancement
5. Opportunity to travel
6. Ample time off for family and hobbies
7. Self-fulfilment
8. Offers secure future
9. Good employee relations
10. Community and humanitarian service
11. Others

In the questionnaire, there were ten variables including the item "others". However, when the filled questionnaires were tabulated, community and humanitarian service as a factor under "others" was quite evident. Thus, this new category is included in the analysis.

The employed graduates are quite consistent in the choice of six most important factors in making them happy in their respective jobs. In order of importance, these are:

1. Able to utilize talents
2. Good employee relationship
3. Secure future
4. Good prospects for career advancement
5. Self-fulfilment
6. Good income

The other four variables, viz. ample time for family and hobbies, scholarship, travel opportunities, and community and humanitarian service have not been very critical factors.

When analyzing job satisfaction factors across typology of schools, the respondents have a consensus on the top two factors—able to utilize talents and good employee relations. However, the graduates of UP and the Protestant schools placed heavier weight on self-fulfilment. On the other hand, graduates of arts and trade schools emphasized more the income prospects, while those from teacher-training institutions emphasized good employee relations.

Across the occupational classifications, the respondents are again unanimous on the top two variables. However, the clerical, sales and service workers placed emphasis on good employee relations more than anything else. On the other hand, the agricultural workers, probably due to having the lowest average incomes, placed a greater emphasis on income while for the armed forces personnel it was a secure future and income.

It should be noted that, as the findings revealed, income is not the most important factor in employee job satisfaction. Of paramount importance are non-monetary considerations, such as ability to utilize one's talents, good employee relations, secure future, good prospects for career advancement and self-fulfilment. Therefore, the employer who is concerned with employee satisfaction must attend to these non-monetary factors.

6.5.2 JOB AND INCOME MOBILITY OF THE EMPLOYED GRADUATES

It has been established that the present income of employed graduates varies across regions, occupational classification, nature of the industry where employed, honours achieved while in school and the type of school where the degree was earned. This section deals with the mobility of employed graduates across jobs and corresponding changes in income as a result of job mobility. Explanations are also offered to indicate the extent of changes in income and the variables that influenced such changes.

For the purpose of this analysis, the employed graduates were divided into two groups viz.:

1. Employed graduates on their second job
2. Employed graduates on their third job

6.5.2.1 Employed Graduates on Their Second Job

The length of stay in the first job has been, in all instances, shorter or equal to the length of stay on the second and present job. Except in very rare instances, the second job gives a higher pay than the first job. Eight hundred and seventy respondents reported previous and present incomes. The annual growth rate ranges from 3.4 per cent for teachers to 24 per cent for secretaries/typists. The average growth rate of income of clerical and related workers (15.32%) is higher than that of professional and technical workers (11.4%). On the whole, the majority of the job changes are within major occupational groupings. For example, there is greater mobility within the professional and technical group than from clerical and related workers to professional and technical group.

6.5.2.1.1 *Professional and Technical Workers*

The income of professional and technical workers is, as expected, higher than for clerical and related workers. However, the growth over time has not been as high as for those in lower occupational categories. Among the professional and technical workers, the religious workers/athletes showed the highest growth rate of 16 per cent. However, the judges/justices/lawyers exhibited the highest average monthly pay of all the professional and technical workers followed by the applied scientists/accountants/auditors, and religious workers/athletes. At the other extreme are the teachers, who had the lowest pay of all professionals in 1977 and at the same time the lowest annual growth rate. Despite their low pay, the teachers have remained second to the longest in their present occupation. The professionals with the highest monthly pay (P. 1,087.20, i.e. judges/justices/lawyers) stayed the longest (nine years) on their present job whereas teachers stayed for seven years.

When examining monthly income and occupational change patterns one notices that the professional and technical group of workers have not recruited many from the administrative, executive and managerial workers. The judges/justices/lawyers recruited 6.25 per cent from the administrative/executive/managerial group while the artists/journalists, 5.88 per cent. Hardly any of those from the administrative/executive/managerial group became physical and natural scientists and none of them became applied and medical scientists. This seems to show that the administrative/executive/managerial group is an end point in career similar to the professional and technical positions.

With regard to the first job, the applied scientists had the highest pay but stayed the shortest time with the first position, followed by the judges/justices/lawyers who worked second in terms of length of stay in the first position together with the teachers. The artists/journalists had the lowest pay in their first job but the growth of their income was such that they outranked the teachers in terms of present (1977) pay.

6.5.2.1.2 *Physical and Natural Scientists*

The income of physical and natural scientists has increased from P. 334.91 in 1972 to P. 657.32 in 1977 exhibiting an annual growth rate of 14.4 per cent. The majority of physical and natural scientists came from occupations within the professional and technical worker category, i.e., many came from the same occupation (10.38%). A sizeable number came either from the teaching profession or from other professional and technical positions. Besides, the professional and technical occupations, clerical and related workers (16.4%) and production and transport workers (6.6%) became physical and natural scientists.

6.5.2.1.3 *Applied Scientists*

The income of applied scientists (P. 943.36) ranked second to that of lawyers P. 1,087.20 but the growth (8.6%) has not been as high as for lawyers or religious workers. A very high percentage (34.4%) of the present applied scientists were also applied scientists on their first job. Very few came from the clerical and related workers but several (22.22%) were from among the production and transport workers. The highly specialized nature of the work of the applied scientist probably limited the mobility across a wide range of occupations. There is probably a close job relationship between the applied scientists and transport and production workers.

6.5.2.1.4 *Medical Scientists*

The medical scientists on their first job had a lower pay than the teachers. But the high growth rate of 10.2 per cent allowed for a higher pay in 1977 of P. 614.50 a month. As with the applied scientists, the movement of medical scientists was within their occupation (41.55%) or from other professional and technical categories (46.48%). A negligible percentage came from outside the professional and technical workers. However, there is an indication that the present medical scientists have worked as clerks (5.63%), service workers (1.31%), teachers, etc. Such a phenomenon is probably reflective of the lack of employment opportunities which is pervasive across all occupations and especially in many developing countries like the Philippines.

6.5.2.1.5 *Accountants and Auditors*

The accountants and auditors exhibited the second highest growth in income; their average monthly pay has moved from P. 468.58 in 1972 to P. 924.89 in 1977. Of all the professional and technical workers, the accountants and auditors have constituted the highest percentage coming from outside the professional and technical group of workers. Forty per cent of the present accountants and auditors came from a clerical position; 22.86 per cent retained the same occupation. Again, this is probably due to the very nature of the work which is closely related to clerical work and to the employment situation.

6.5.2.1.6 *Judges, Justices and Lawyers*

The judges/justices and lawyers have the highest pay among the professional and technical workers (P. 1087.20) and the longest stay on their present and previous job. Their good pay probably has some stabilizing effect. Though 15.63 per cent came from the same professions 40.62 per cent came from other positions in the professional and technical category. There is an even number of teachers and religious workers who join the profession.

6.5.2.1.7 *Teachers*

The teachers have good reason to be dissatisfied: they are the lowest paid workers among the professional and technical group. However, their being in a discipline where humility, obedience and servility have traditionally been viewed as virtues has probably dissuaded them from either leaving the profession or demanding better conditions. They ranked second to lawyers for staying on their job—in spite of a low pay! Also, there are only limited options within the labour market and teachers do not have many alternatives. Previously 34.76 per cent were teachers but 42.65 per cent were previously employed in other professional and technical jobs.

6.5.2.1.8 *Religious Workers and Athletes*

Religious workers and athletes have the distinction of attaining the highest (16%) growth in income from P. 409.85 in 1972 to P. 862.52 in 1977. Moreover, they ranked next to the accountants/auditors as have shifted from a clerical position before becoming religious workers/athletes. Many of them used to be teachers (13.09%) although 13.09 per cent have maintained the same profession.

6.5.2.1.9 *Artists and Journalists*

Of the 17 artists and journalists none have previously been employed in clerical positions. Many of them came from the same profession and technical jobs. They ranked second to judges/justices and lawyers for recruiting from the administrative, executive and managerial workers.

6.5.2.1.10 *Clerical and Related Workers*

Income of clerical and related workers has increased faster than that of the professional and technical workers. The low base pay and social legislation that favour those from lower income have probably influenced this higher growth rate of 15.32 per cent compared to that of professional and technical workers: 11.47 per cent. In 1977, among clerical and related workers, the clerical supervisors had the highest average monthly pay of P. 781.84 followed by the secretaries/typists who exhibited the highest growth in income of 24 per cent. As with judges/justices/lawyers among the professional and technical profession, the clerical supervisors, with the highest salaries, have remained the longest (9 years) on their present job.

Of the present clerical and related workers 46.43 per cent came from the same job and same major occupational grouping. Those coming from higher occupational groups—such as professional and technical, administrative/executive/managerial groups—account for a small percentage and have assumed positions as clerical supervisors, secretaries, bookkeepers/cashiers at a higher salary than their previous occupation. Among clerical and related workers there is a considerable amount of mobility. This phenomenon reflects the fact that clerical and related positions generally serve as the starting point in the job pattern and, as shown in the analysis of the professional/technical group, a sizeable proportion of the present professional and technical workers were once clerical and related workers.

6.5.3 DEGREE OF SATISFACTION WITH THE PRESENT JOB

Many of the employed graduates (65.3%) expressed satisfaction with their present jobs. Among the 3119 respondents, the reasons for being satisfied are ranked in the following order: Able to utilize talents; Good employee relations; Good prospects for career advancement; Offers secured future; Self-fulfilment; Good income; Ample time off for families and hobbies; Opportunity to travel.

For the 33 per cent who expressed dissatisfaction with their present jobs, the following factors have been cited:

	Reasons for Job Dissatisfaction	%
1.	Poor Prospects for Promotion	37.1
2.	Not Enough Opportunity for Self-fulfillment	20.2
3.	Poor working condition	10.0
4.	Unable to Apply Training	9.8
5.	Not Suited to Personal Objective	7.9
6.	Low Salary	7.8
7.	Can't Get Along with Co-workers	1.1
8.	Insecurity of Tenure	0.2
9.	No Data	5.9
	Total	100.00

Job satisfaction across occupations indicates that the least satisfied are those in the armed forces, sales, and agriculture. Those highly satisfied are: the professional, technical group; clerical and related workers; and administrative, executive and managerial workers. Across school types, the highly satisfied, despite their relatively low income, are graduates of the proprietary schools and Catholic schools. The least satisfied came from agricultural colleges, foundation and teacher-training institutions.

On the national level, 65.3 per cent are satisfied with their present job. But across regions, findings show that the highest percentage of job satisfaction is in Region I at 76.41 per cent; Region VI, 76.36 per cent; Region XII, 73.3 per cent and Region II, 71.74 per cent.

The least satisfied come from Region III (53.9%) in Central Luzon; Region IX, 53.97 per cent; Region XIII, 61.76 per cent; Region X, 60.05 per cent; Region XI, 45.19 per cent—all in Mindanao.

6.6 *Earnings and Their Determinants*

6.6.1 INCOME PROFILE OF EMPLOYED GRADUATES

Income is generally considered an objective indicator of success. To gauge the success of the employed graduates, one has to look into their income levels. The study reveals that the monthly gross income of the graduates on the national level is P. 715.12 with the combined Metro Manila and Region IV-A exhibiting the highest at

P. 901.09. Graduates from Region XIII follow with P. 845.23 and VII at P. 838.55. Regions where gross monthly income is low include Regions II, P. 484.53; X, P. 530.98; VI, P. 540.63; and IX, P. 551.03.

Because the median age of the employed graduates is only 30-34 and thus has not reached the prime point in their career explains the higher average income of fathers (P. 1234.34) and mothers (P. 921.44) compared to employed graduates' income of P. 715.12.

Income levels vary across typology of school, honours attained while in school, and occupational and industrial classification. Graduates of the UP exhibit the highest mean income at P. 1412.20. Graduates of other state colleges and universities rank second with P. 791.85, followed by graduates of colleges on foundation status with a mean income of P. 706.57. Graduates with the lowest income come from agricultural colleges with P. 552.73 and teacher-training institutions with P. 583.03. Graduates of private proprietory institutions, arts, and trades schools, Catholic schools and Protestant schools have an income range of P. 699.21, P. 678.32, P. 652.43 and P. 629.69 respectively. Not surprisingly, those who finished with honours in college have, on the average, higher incomes than those without. However, those respondents who report incomes above P. 5,000 per month also reported graduating "without honours".

The administrative, executive and managerial workers have the highest average monthly income of P. 1580.89, followed by those from the armed forces at P. 1522.27. The occupations that occupy the bottom level in terms of average monthly income are the service workers, and clerical and related workers at P. 355.17 and P. 476.83, respectively (see Table 6.6). Across industrial classifications, those belonging to financing, insurance and real estate exhibit the highest at P. 897.05 followed by mining and quarrying (P. 787.90), manufacturing (P. 778.04) and construction (P. 773.24). Those from agriculture, fishery and forestry and community, social and personal services fall among the lowest at P. 579.39 and P. 669.30 respectively. (See Table 6.7.)

6.6.2 ANALYSIS OF INCOME AND ITS PREDICTORS

This section aims to identify the various variables that significantly contribute to income and income changes. The model consists of the average monthly earnings as the dependent variable and a set of independent variables consisting of the following:

1. Personal Variables
   age
   sex
   civil status
2. Socio-economic Status Variables
   father's occupation
   father's gross salary
3. Characteristics of the Job of the Graduates
   occupational classification
   industry classification
   type of firm or organization
   (government or private and single proprietorship, partnership and corporate type of company structure)
   initial earnings and factors in getting first job
   cumulative length of stay which reveals employee's experience
   waiting period and method of recruitment
4. Region
5. Educational Variables
   typology of School
   educational attainment, additional training and field of specialization
   year of Graduation and academic honours achieved
6. A set of dummy variables

The regression equation to take care of the above mentioned variables is as follows:

$$E = a + \Sigma b_{1i} X_{1i} + \Sigma b_{2i} X_{2i} + \Sigma b_{3i} X_{3i} + \Sigma b_{4i} X_{4i} + \Sigma b_{5i} X_{5i} + b_6 X_6 + b_7 X_7 + e$$

Where: E = Average monthly earning of the graduate
X_{1i} = Set of personal variable
–age
–sex
–civil status
X_{2i} = Set of job characteristics of the graduates
–occupational classification
–industry classification

–type of firm/organization (government and private)
–initial earnings
–cumulative length of stay (experience)

X_{3i} = Set of socio-economic status variables
–father's occupation
–father's gross salary

X_{4i} = Set of dummy variables indicating qualification held (educational attainment, honours received, additional training) and educational institution attended.

X_{5i} = Set of dummies indicating region by province

X_6 = Factors in getting first job

X_7 = Waiting period to get first job

e = Stochastic/random error term

With the above equation, a regression run was made using the step-wise method. There were 68 variables identified at 0.05 level of significance. These variables have an $R^2 = 0.39623$ or explaining roughly 39.62 per cent of the levels of income of the employed graduates. The variables with the high significance with F value greater than 1 are as follows:

1. Personal variables
    –age ranked 2nd
    –male ranked 4th
    –civil status single ranked 14th
2. Socio-economic status variables
    Father's occupation and gross income were not highly significant with *F* value of less than 1.
3. Characteristics of the job of the graduates
    3.1 Occupational classification
        3.1.1 Administrative position ranked 1st
    3.2 Industry classification
        3.2.1 Finance, Insurance, Real Estate and Business services ranked 3rd
        3.2.2 Mining and quarrying ranked 5th
        3.2.3 Manufacturing ranked 10th
        3.2.4 Wholesale and retail trade ranked 11th
        3.2.5 Electricity, gas and water ranked 16th
    3.3 Type of firm or organization does not seem to be significant. Private employees ranked 26th with *F* value of less than 1

while government employees has not been among the 68 variables.

3.4 Initial earnings and factors in getting the first job likewise are not significant.

3.5 Cumulative length of stay on the job ranked 21st with an *F* value of less than 1.

3.6 School placement office ranked 12th and significant but waiting period turned out to be less significant ranking 27th with an *F* value of less than 1.

4. Region

Of all the regions, only Metro Manila ranked high at 25th rank with F value of less than 1.

5. Educational variables

As expected educational attainment on a bachelor's degree level and being an honour graduate are highly significant ranking 6th and 9th respectively. Of all the school typology, graduates of the University of the Philippines ranked very high at 7th while other school types have an *F* value of less than 1.

Engineering and technology graduates ranked 8th, the highest rank of all fields of specialization, followed by nutrition and dietetics at rank 13th. It is helpful to have additional training supplementing the formal schooling. An additional training has been quite significant in explaining employed graduates' income. It ranked 15th with an *F* value of 3.626. As for the year of graduation, it was not very significant. It ranked 23rd with an *F* value of less than 1. (For details, see Table 6.8.)

6.7 Financing of Higher Education

By virtue of the constitutional provision ensuring universal elementary education and the limited funds available for education, government financial support to education has been limited to the first two levels of education. Approximately 92 per cent of elementary and 40 per cent of secondary enrolments are funded by the government. The government funding for tertiary education is limited to the State colleges and universities that account for 8 to 15 per cent of total enrolment at this level. The private sector predominates in tertiary education. Correspondingly, the funding is primarily from private sources, except for some scholarship and curricular programme support from governmental agencies such as the National Science Development Board (NSDB), the Educational Development Implementing Task Force (EDPITAF) and the Fund for Assistance to Private Education (FAPE).

The findings of this study have confirmed the lack of government funding for tertiary education. The family and the student bear the biggest burden in funding tertiary education. Up to 69.87 per cent of the respondents were financed by their respective families and 23.04 per cent were self-supporting. As shown in section 6.2.5, 22.04 per cent have been working while studying in college. Government scholarships accounted for 2.63 per cent support, university scholarships, 3.67 per cent and non-government loans and scholarships, 0.6 per cent.

Private scholarships are developing; the largest source is the Philippine Coconut Producers Association (COCOFED). To date, there are 5000 scholars under the COCOFED.

6.8 Conclusions for Policy and Implications for Planning

A person living in a developing country that is striving for growth and development, in a world more influenced by economic forces than by the social and political milieu, must focus on the economy. With this orientation, the paramount objective of graduates of the school system becomes employment or successful careers. While this is their motivation, the humane aspects of education should not be overlooked; that humane element is capable of providing greater meaning to employment and career objectives. It is in this respect that society, if it aims for the greater happiness of all, should facilitate the attainment of desirable objectives defined by those who are about to contribute—the graduates—to society's well-being.

Therefore, the crucial elements that could hasten the attainment of employment and career objectives must be supportive; the school system and its curricular programme, and the economy, especially the employers of graduates, must coordinate their respective roles. The school system must define its development objectives in such a way that the ultimate outcome of the educational process is known. Specifically, the components of the higher education system must articulate their respective intentions. These components, as this study shows, are the UP system, the other State Colleges and

Universities, the State teacher-training institutions, the agricultural colleges, the arts and trade schools, and private higher education consisting of the proprietary educational institutions, the foundation type schools and the church-related institutions (Catholic and Protestant). For example, a certain type of school should be able to declare to the public that its goal is to produce graduates who would be able to fit into specific occupational and economic niches as well as to provide the humane element vital for life. Such occupations would be able to provide some economic benefits of certain monetary magnitude. Consistent with this goal, curricular programmes must be clearly defined and financial incentives must be available. The findings of this study would allow for the definition, articulation, and delineation of such goals. The institutions are encouraged to avail themselves of these facts in order to substantiate their respective institutional goals and missions.

Once the institutional mission is defined, the curricular programmes must be of a quality and flexibility to meet the peculiarities and nature of work. As revealed in this study, there are some curricular programmes, like commerce and business administration, that fit into various occupations. Thus, the flexible element of the programme should be accentuated in order that the graduates of such programmes could gradually become polytechnical and therefore have several job and career options. A complementary component is the need for an instrument that would channel college-bound students to certain programmes consistent with aptitudes, mental capabilities and other intellectual and non-intellectual elements that provide greater assurance of success.

The formal educational system is still very dominant. Yet significant number of respondents in the sample felt that non-formal educational programmes were important. The potentialities of non-formal education should be explored especially in light of the need to increase the efficiency of manpower stock by three times in order to attain the growth target of the national economic plan. As to the formal system, it has been suggested that the curriculum incorporate work experience in order to become more responsive to the needs of the job and to provide a smoother transition from school to work. In the suggested scheme, education would be interrupted by work experience or interspersed with work. A pilot project to test the feasibility of this suggestion should be explored.

Except for those who were employed while in school the transition, from school to work, has not been easy. For some graduates the waiting period prior to first employment reached up to two years. Limited job opportunities and low salaries have been identified as the major reasons for long delays in finding employment. In this respect, the economy has to be improved to absorb qualified manpower, to provide more job options and to develop a competitive remuneration system commensurate with qualifications. Waiting period varies with the type of school; this may suggest a qualitative differential among the graduates.

The majority of graduates are satisfied with their respective jobs. As long as employers are able to provide what satisfies graduates, an equilibrium can exist. Contrary to common misconceptions, money has not been the most important element of job dissatisfaction. What is considered important is the assurance of being able to utilize one's talents; having good employee relations; and having good prospects for promotions, career advancement, a secure future, and self-fulfilment. After all these criteria are met then money becomes important. This finding, therefore, suggests that employers must focus on the talents of their employees. With such job satisfaction, employed graduates, according to this study, will be less concerned with the monetary aspects of the job.

Unlike in many countries, tertiary education in the Philippines is primarily dependent on private financial support.While institutional financial support is provided by the national government to State colleges and universities which enrol 15 per cent of those in tertiary education, private higher education, enrolling the remaining 85 per cent, is left on its own. This study showed that public student support, enabling access to public and private higher education, is very minimal. Government scholarships account for only 2.6 per cent and government loans 0.2 per cent of support. Moreover, the lack of financial support has been a factor in deterring students from selecting the course most preferred, thus contributing to certain disillusionments among the employed graduates.

Table 6a. *Number and Per Cent Distribution of Employed Graduate Respondents by Dialect Spoken in Early Childhood*

Dialect Spoken	*Number*	*Percentage*
Tagalog	1,400	30.0
Cebuano	1,298	28.0
Iloco	523	11.0
Ilongo	348	7.0
Bicol	266	6.0
Pampango	159	3.0
Pangasinan	123	3.0
Samar/Leyte	120	3.0
Hiligaynon	84	2.0
Others	334	7.0
Total	**4,655**	**100.0**

Table 6.1 *Number and Per Cent Distribution of Employed Graduates by Occupational Classification*

Occupational Group	*Number*	*Percentage*
Professional, technical and related workers	1,951	42.67
Administrative, executive and managerial workers	272	5.95
Clerical and related workers	1,694	37.04
Sales workers	80	1.75
Service workers	96	2.10
Agriculture	32	0.70
Production, Transport and labourers	425	9.29
Armed Forces	23	0.50
Total	4,573	
No data	82	
Grand Total	**4,655**	**100.00**

Table 6.2 *Number and Per Cent Distribution of Employed Graduates by Industrial Classification*

Industry	*Number*	*Percentage*
Agriculture, Fishery & Forestry	164	3.5
Mining & Quarrying	581	12.5
Manufacturing	610	13.1
Electricity, Gas & Water	271	5.8
Construction	122	2.6
Wholesale & Retail Trade	182	3.9
Transportation, Storage and Communication	211	4.5
Financing, Insurance & Real Estate	287	6.2
Community, Social & Personal Service	2,226	47.8
Total	4,654	
No data	1	
Grand Total	4,655	100.00

Table 6.3 *Number and Per Cent Distribution of Employed Respondents, Spouse, Father and Mother Categorized by Occupational Classification*

Occupational Classification	*Employed Grad.*		*Spouse*		*Father*		*Mother*	
	Number	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*
Professional, Technical Workers	1,951	41.67	886	34.74	588	17.11	456	11.26
Administrative, Executive and Managerial Workers	272	5.95	111	4.35	366	10.65	86	2.12
Clerical and related workers	1,694	37.04	500	19.61	227	6.60	36	0.89
Sales Workers	80	1.75	147	5.76	338	9.85	276	6.82
Service Workers	96	2.10	57	2.24	100	2.91	29	0.72
Agriculture	32	0.70	48	1.88	1,117	32.50	95	2.35
Production, Transport & Labourers	425	9.29	143	5.61	419	12.19	125	3.09
Armed Forces	23	0.50	38	1.49	135	3.93	0	0.00
Non-working Husband	0	0.00	27	1.06	147	4.28	N.A.	N.A.
Housekeeper	0	0.00	593	23.26	N.A.	N.A.	2,945	72.75
Total	4,573	100.00	2,550	100.00	3,437	100.00	4,048	100.00
No data	82		282		392		234	
Grand Total	4,655		2,632		3,829		4,282	

Table 6.4 *Course Specialization Occupation Matrix (in %)*

	Business Administration	*Teacher Training*	*Engineering & Technology*	*Medical Sciences*	*Agriculture*	*Law & Foreign Service*	*Liberal Arts*	*Social Sciences*	*Humanities*	*Physical & Biological Sciences*	*Others*	*Total*
Professional, Technical & Related Workers	17.7	22.7	15.0	15.3	6.1						23.2	100.0
Administrative, Executive & Managerial Workers	41.7	9.2	15.1			8.9		5.2			19.9	100.0
Clerical & Related Workers	60.7	12.2				1.8	3.6	2.4			19.3	100.0
Sales Workers											31.7	
Service Workers	24.4	14.6		8.5	6.1	13.4					32.9	100.0
Agricultural Workers	10.3	10.3			65.5		3.4		3.4		7.0	100.0
Production, Transport and Labourers	11.9	9.7	51.7		2.8					2.6	21.3	100.0
Armed Forces	39.1	21.7					8.7		17.4		18.1	100.0

Table 6.5 *Number and Per Cent Distribution of Employed Graduate Respondents by Waiting Period*

	After finishing the course		*After actively looking for work*	
	Number	*Per cent*	*Number*	*Per cent*
Less than 1 month	6	0.2	4	0.2
1-2 months	1,116	38.0	990	54.4
3-4 months	441	15.0	242	13.3
5-6 months	350	11.9	164	9.0
7-12 months	505	17.2	216	11.9
More than 1 yr.–2 yrs.	294	10.0	130	7.1
More than 2 years	224	7.6	74	4.1
Total	2,936	100.0	1,820	100.0
Not applicable (Working Students)	698		1,802	
No data	1,026		1,033	
Grand Total	4,655		4,655	
Weighted Average Waiting Period	5-6 months (3.68)		3-4 months (3.16)	

Table 6.5a *Number and Per Cent Distribution of Employed Graduate Respondents by School Type and by the Degree of Importance of the Means of Acquiring the First Job by Rank*

School Type	*Degree of Importance by Rank*						
	School Placement Office	*Govt. Employment Office*	*Media Advertising*	*Relatives or Friends Recom–mendation*	*Teacher's Recom–mendation*	*Hiring Company's Personnel Office*	*Others*
U.P. System	4	6	5	2	1	3	7
Other State Colleges	2	6	5	3	4	1	7
Teacher Training or Community School	1	5	6	2	3	4	7
Agricultural Colleges	1	2	6	5	3	4	7
Arts and Trades	3	4	6	5	1	2	7
Catholic School	4	6	5	1	3	2	7
Protestant School	1	5	6	3	2	4	7
Proprietary School	4	6	5	1	3	2	7
Foundation	2	5	6	1	4	3	7
Total	4	5	6	1	3	2	7

Table 6.6 *Number and Percentage Distribution of Employed Graduate Respondents by Income Levels and by Occupation*

Occupational Classification	*Income Levels in Pesos*														Total	Weighted Average Income
	Below 500		*500–999*		*1000–1499*		*1500–2999*		*3000–3999*		*4000–4999*		*5000–Over*			
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*		P.
Professional, technical and related workers	529	29.5	938	51.6	280	58.0	73	50.0	57	52.3	11	28.2	2	22.2	1890	799.37
Administrative, executive and managerial workers	7	0.4	96	5.3	65	13.5	27	18.5	33	30.3	21	53.8	6	66.7	255	1,580.89
Clerical and related workers	993	55.4	573	31.5	50	10.3	11	7.5	2	1.8	2	5.1	1	11.1	1632	476.33
Sales workers	30	1.7	30	1.6	13	2.7	0	0.0	1	0.9	0	0.0	0	0.0	74	658.49
Service workers	78	4.3	14	0.8	3	0.6	0	0.0	0	0.0	0	0.0	0	0.0	95	355.17
Agricultural, animal husbandry, forestry workers, fish, hunters	14	0.8	9	0.5	5	1.0	1	0.7	0	0.0	0	0.0	0	0.0	29	629.05
Production and related workers trans. equipment operators, lab.	141	7.9	156	8.6	60	12.4	31	21.2	15	13.8	2	5.1	0	0.0	405	807.08
Workers not classified by occupation																
Members of the Armed Forces	2	0.1	6	0.3	7	1.4	3	2.1	1	0.9	3	7.7	0	0.0	22	1,522.27
Total	1794	100.0	1812	100.0	483	100.0	146	100.0	109	100.0	39	100.0	9	100.0		

Table 6.7 *Number and Percentage Distribution of Employed Graduate Respondents by Industrial Classification and by Income Level*

Industrial Classification	*Income Levels (in Pesos)*														*Total*		*Weighted Average*
	Below 500		*500–999*		*1000–1499*		*1500–1999*		*2000–2999*		*3000–4999*		*5000–over*				
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*P.*
Agriculture, forestry and fishery	86	4.7	51	2.8	15	3.1	2	1.4	2	1.8	1	2.6	0	0.0	157	100.0	579.39
Mining and quarrying	203	11.2	257	13.9	48	9.8	29	19.7	26	23.0	3	7.7	3	33.3	569	100.0	787.90
Manufacturing	199	11.0	239	12.9	75	15.4	25	17.0	21	18.6	5	12.8	0	0.0	564	100.0	778.04
Electricity, Gas & Water	120	6.6	90	4.9	33	6.8	9	6.1	8	7.1	3	7.7	0	0.0	263	100.0	708.85
Construction	55	3.0	38	2.0	12	2.5	6	4.1	2	1.8	3	7.7	1	11.1	117	100.0	773.24
Wholesale & Retail Trade	84	4.6	56	3.0	13	2.7	3	2.0	3	2.7	3	7.7	2	22.2	164	100.0	704.02
Transport, Storage and Communication	99	5.5	65	3.5	20	4.1	2	1.4	11	9.7	3	7.7	0	0.0	200	100.0	707.24
Financing, Insurance, Real Estate & Business Services	89	4.9	93	5.0	52	10.7	18	12.2	8	7.1	8	20.5	0	0.0	268	100.0	897.05
Community, Social & Personal Services	881	48.5	965	52.0	220	45.1	53	36.1	32	28.3	10	25.6	3	33.3	2,164	100.0	669.30
Total	1816	100.0	1854	100.0	488	100.0	147	100.0	113	100.0	39	100.0	9	100.0			

Table 6.8 *Variables in the Regression Model*

Variables	*Beta*	*B*	*F*
1. Graduate Occupation: Administrative	0.23687	600.55951	33.493
2. Age	0.17066	12.10812	56.285
3. Industrial Classification: Finance, Insurance, Real Estate and Business Services	0.15122	311.49624	49.985
4. Sex: Male	0.11544	123.93886	30.260
5. Industrial Classification: Mining and Quarrying	0.11342	167.78403	15.457
6. Educational Attainment: Bachelor's Degree Level	0.10803	156.82036	4.321
7. School Type: UP	0.08124	218.42439	4.552
8. Field of Specialization: Engineering and Technology	0.07400	120.60599	2.131
9. Honour Graduates	0.06423	131.08700	12.988
10. Industrial Classification: Manufacturing	0.05798	92.77325	6.085
11. Industrial Classification: Wholesale and Retail Trade	0.05383	152.80253	7.292
12. Recruitment System: School Placement Office	0.04581	8.23709	1.613
13. Field of Specialization: Nutrition and Dietetics	0.04013	122.06491	1.710
14. Civil Status: Single	0.03910	42.10277	3.731
15. Additional Training	0.03543	28,35945	3.626
16. Industrial Classification: Electricity, Gas and Water	0.02800	64.33633	1.887
17. Industrial Classification: Construction	0.01749	57.67450	0.854
18. Industrial Classification: Agriculture, Fishery and Forestry	0.01734	53.12778	0.759
19. Graduate Occupation: Members of the Armed Forces	0.01638	132.03871	0.601
20. Father's Occupation: Professional, Technical and Related Workers	0.01599	23.92941	0.274
21. Cumulative Length of Stay: Experience	0.01405	0.03941	0.262
22. Recruitment System: Through Government Employment Office	0.01310	2.28361	0.126
23. Year Graduated	0.01277	1.70520	0.472
24. Industrial Classification: Transportation, Storage and Communications	0.01202	31.61306	0.395
25. Region: XIII–Metro Manila	0.01145	62.06217	0.412

Variables	*Beta*	*B*	*F*
26. Type of Firm/Organization: Private	0.01044	11.64265	0.177
27. Waiting Period	0.00886	0.01003	0.239
28. Vocational Course: Beauty and Fashion Courses	0.00602	102.68344	0.111
29. Recruitment System: Through Personnel Office of Hiring Company	0.00426	0.83691	0.025
30. Father's Gross Income	0.00332	0.00007	0.035
31. Vocational Course: Practical Arts and Trade Courses	0.00225	38.37301	0.015
32. Field of Specialization: Humanities	0.00200	8.02200	0.006
33. Recruitment System: Media Advertising	−0.00810	−1.44140	0.069
34. Father's Occupation: Administrative, Managerial Workers	−0.01063	−19.18581	0.154
35. Father's Occupation: Members of the Armed Forces	−0.01272	−40.88226	0.360
36. Father's Occupation: Sales Workers	−0.01827	−32.46709	0.439
37. Vocational Course: Technical–Vocational Courses	−0.02244	−46.36743	0.455
38. Graduate's Occupation: Agriculture, Fishery and Forestry	−0.02654	−160.69834	1.199
39. Recruitment System: Through Recommendation from Former Teachers/Instructors	−0.02780	−5.11019	0.748
40. Initial Earning: Higher Initial Earning	−0.03240	−0.00006	1.577
41. Father's Occupation: Clerical Workers	−0.03282	−68.69413	1.724
42. Field of Specialization: Law and Foreign Service	−0.03298	−109.75015	1.315
43. Father's Occupation: Service Workers	−0.03761	−117.03833	3.146
44. Field of Specialization: Music and Fine Arts	−0.03916	−145.61697	2.072
45. Graduate Occupation: Sales Workers	−0.04522	−207.59469	2.829
46. Graduate Occupation: Professional, Technical and Related Workers	−0.04640	−50.43462	0.282
47. Region: VII: Central Visayas	−0.04865	−75.45581	3.474
48. Vocational Course: Business and Commercial Courses	−0.05172	−125.62619	2.459
49. Field of Specialization: Physical and Biological Sciences	−0.05311	−166.58710	2.950
50. Field of Specialization: Agriculture (Natural Sciences)	−0.05337	−141.87687	2.091
51. Father's Occupation: Production and Related Workers	−0.05382	−85.01791	3.339

Variables	Beta	B	F
52. Region: III–Central Luzon	–0.05498	–130.60398	8.508
53. Region: II–Cagayan Valley	–0.05629	–190.78834	8.936
54. Father's Occupation: Agriculture, Fishery, and Forestry	–0.05895	–67.43852	2.535
55. Region: VIII–Eastern Visayas	–0.06120	–193.49876	10.996
56. Field of Specialization: Social Sciences	–0.06682	–147.74839	2.747
57. Region: XII–Central Mindanao	–0.06729	–183.03022	12.281
58. School Type: Sectarian Schools	–0.06759	–282.03846	5.698
59. Region: I–Ilocos Region	–0.06795	–169.74542	13.060
60. Region: V–Bicol Region	–0.06873	–184.80046	12.710
61. Field of Specialization: Business Administration	–0.07735	–86.77684	1.172
62. Graduate Ocupation: Production and Related Workers	–0.08206	–147.79190	2.244
63. School Type: Other State Colleges, Teacher Training, Arts and Trade, Agricultural Colleges	–0.09374	–186.83882	3.630
64. Field of Specialization: Medical Sciences	–0.11205	–171.74610	4.156
65. Graduate Occupation: Service Workers	–0.11320	–376.69866	11.274
66. Region: XI–Southern Mindanao	–0.11693	–202.26691	33.829
67. Region: VI–Western Visayas	–0.11746	–266.71171	37.232
68. Region: X–Northern Mindanao	–0.12482	–233.40121	37.095
69. Graduate Occupation: Clerical Workers	–0.20550	–227.87242	5.738
70. School Type: Proprietary Schools	–0.20757	–242.69265	6.996
71. School Type: Foundation Schools	–0.28465	–306.04199	11.402

$R^2 = 0.39623$ F = 19.68815, d.f. 72, 1,952 a = 448.7559

Chapter 7

The Higher Education System and Labour Market as Perceived by the Employers[1]

7.1 Introduction

The effectiveness of a nation's educational system can be gauged by the degree of absorption of the graduates of the various educational institutions into the nation's active labour force. Graduates emerge with academic preparations which, hopefully, meet the demands of the labour market. To say, however, that diplomas alone ensure the consequent employment of graduates would be indulging in presumption. While it is possible to determine the manpower needs of the economy and the manpower stock available, and to formulate plans to match them; it is not easy to pinpoint with precision the factors that would effect a perfect correspondence between these two sides of the labour market. One factor that cannot be overlooked, however, is the importance of the role that employers play in the labour market. Until the graduates of higher education are hired, studies on manpower supply and demand remain academic abstractions. Actual employment constitutes the meeting of the two sides of the labour market.

7.1.1 AREAS OF INTERACTION BETWEEN EMPLOYERS AND GRADUATES

Employers in hiring new workers usually create "job descriptions" which list not only the responsibilities and functions of the position, but also the minimum work experience and educational qualifications necessary for that particular position. While this aspect of recruitment is important in correlating the academic training of the prospective employee to the demands of the job, this is not the only consideration taken into account. In a close-knit society like the Philippines, family relationships or recommendations from relatives or friends may ultimately determine employment. School ties may also be an important determinant in securing jobs.

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[1] Based mainly on contributions from FAPE.

This chapter attempts to explore the hiring practices of the employers. It also tries to look into the dependence of employers on the different methods of recruitment existing in the country as well as the role of employers in the development of human resources in the country through pre-employment training, in-service training programmes, and the like.

7.2 The Methodology of the Survey

7.2.1 THE SAMPLING DESIGN

A stratified systematic sampling technique with a random start was adopted.

The sample population included all establishments and government offices employing 5 or more workers. It was divided into two major strata; the private sector and the government sector. The list of establishments from the 1975 Economic Census of Establishments of the National Census and Statistics Office (NCSO) was used as the sampling frame for the private sector stratum. Since there was no available list of government offices, the sampling frame for the other stratum was derived from the following sources:

1. List of existing positions in the government offices at the national and regional levels as classified by the Office of Compensation and Position Classification.
2. National Census and Statistics Office survey of local employment.

A 4 x 9 x 10 stratification scheme was constructed for the private sector stratum using 9 regions and 4 employment size categories, and 10 main economic activities as substrata such that substrata within a column fall under an employment size and region and substrata within a row fall under an economic activity.

The four employment size strata used were as follows:

a. 5–9 workers
b. 10–49 workers
c. 50–199 workers
d. 200 or more workers

The ten main economic activities classification was patterned after the 1977 Philippine Standard of Industrial Classification. These are:

a. Agriculture, Hunting, Forestry and Fishing
b. Mining and Quarrying
c. Manufacturing
d. Electricity, Gas and Water
e. Construction
f. Wholesale and Retail Trade
g. Transportation, Storage and Communication
h. Financing, Insurance, Real Estate and Business Services
i. Community, Social, Recreational and Personal Services

All of the 13 administrative regional offices of the country were covered. In this study, however, Regions I & II (Ilocos and Cagayan Valley) and Regions IV, IV-A and V (Metro Manila, Southern Tagalog and Bicol) were combined in the selection of sample respondents. The ten regional groupings were as follows:

Ilocos and Cagayan Valley
Central Luzon
Metro Manila, Southern Tagalog and Bicol
Western Visayas
Central Visayas
Eastern Visayas
Western Mindanao
Northern Mindanao
Southern Mindanao
Central Mindanao

Substratum under an employment size had a sampling fraction of 1/300 for size 5–9, 1/100 for size 10–49, 1/30 for size 50–199 and 1/10 for size 200 and over.

Sample establishments in each substratum were then drawn systematically using a random start. In the sampling process, however, any stratum with an insufficient number of establishments was not left empty and at least two sample establishments were extracted, except for the stratum employment size 5–9 which constitutes the biggest bulk of the population; there cells with less than 100 establishments were left empty.

For the government sector, offices were divided into two substrata: national and local. The national government substratum was further stratified into orientation and level while the local government stratum was stratified into three levels.

A sampling fraction of 1/10 was used to determine the number of sample offices. Again, samples were selected systematically using a random start. (Samples for the regional level were not taken in the stratum of national security because national defence statistics were highly centralized and highly confidential.)

7.2.2 THE QUESTIONNAIRE

The questionnaire comes in two parts:

Part I	Characteristics of employer, methods and criteria of recruitment, training programmes offered, factors in deciding a recruit's starting salary/starting position, and factors important to employees in making their job satisfactory, difficulty in recruiting college graduates, and desirability of offering training to their employees.
Part II	Capitalization, revenues, disbursements, and capital expansion programmes financed; ages and educational profiles of employees.

Pre-testing of the instrument was conducted in two major areas representing urban and rural sectors. Surveys conducted in Manila and Cavite City in last August 1977 represented the urban area, while the one conducted in May 1977 at Sagay, Negros Occidental covered the rural area.

The following are the list of terms used and their definitions:

Establishment : an individual or a firm under one control engaged in one, or predominantly one, kind of economic activity at a fixed single physical location and having permanency of assets, such as goods for resale, materials, products, equipment, etc., in its premises during its operation

Main economic activity : is that activity which provides employment for the largest number of workers. This includes a proportionate allocation of the non-production or operating staff which provides general administrative and office services to the entire establishment.

Professional, technical and related positions : are those which customarily require university level or other highly specialized school training in a specific field of professional knowledge; creative ability in one of the fine arts or *belles lettres*; or talent in entertaining. (For example, engineers, architects, doctors, nurses, draftsmen, accountants, performing artists.)

Administrative, executive and managerial workers : consist of government officials—legislative, administrative and executive, and managers of organizations and establishments.

Clerical, sales and services positions include the following :

Clerical positions : include workers who maintain records of financial transactions and other business activities; handle cash on behalf of an organization or its customers, record oral or written matter by short-hand or typing, operate machines and perform other clerical work. (For example, bookkeepers, cashiers, office clerks, typists, keypunch operators, stenographers.)

Sales positions : are those engaged in or indirectly associated with selling goods or services or all kinds in conducting wholesale and retail business. (For example, sales assistants, counsellors, detailmen, manufacturer's agents, adjusters.)

Service positions : are those directly associated with the performance of protective personal and domestic services. (For example, security guards, janitors, waiters, waitresses, bartenders, launderers, hosts, and hostesses.)

Craftsmen, factory operatives and workers in related occupations : composed of occupations that require processing or production, fabricating, assembling and manufacturing, operating stationary engines, equipment and vehicles to provide powers to move materials, products and persons from one location to another and labourers.

A college graduate employee : refers to an employee who finished at least a four-year course from an institution of higher education offering a curriculum in liberal arts and sciences and empowered to confer degrees and titles to graduates. This includes graduates of vocational/technical courses.

A school employment exchange office : is that department of a school which facilitates finding employment for graduate students as requested by both private and government agencies.

A government employment office : is an agency of the government responsible for finding employment for persons who have applied therein by matching their qualifications not only with the government offices' needs but also with those of private corporations.

A private employment office : is a private agency whose main goal is to find employment for people who have sought assistance from them in matching their specialization and educational background with the job openings offered by both private and government agencies.

Media advertisement : refers to printed announcements such as newspapers and other forms of media communication (e.g., radio, television). These are usually paid by the particular company advertising its personnel needs.

Gate hiring : announcements posted within the facilities of a particular establishment informing passers-by of the company's job openings. This recruitment method also includes those who were informed of openings in certain establishments by friends and relatives but did not carry letters of recommendation with them when they applied for the job.

In-service training : refers to training usually offered free of charge to employees by their respective companies. This training is usually related to the work of the employee with the primary purpose of upgrading and specializing in that particular area of jobs.

Pre-employment training : refers to training offered by establishments prior to employment with the assurance of absorption into the work-force of the company after successful completion of the training.

Employer : is a person who employs one or more paid employees in the operation of business or trade. The employees must contribute to the conduct of the business.

7.2.3 DATA COLLECTION

Data-gathering for the employees' survey was done simultaneous to that for the employed graduates' study. It was done through personal interview with owner or whoever was in charge of personnel recruitment and/or financial operations.

As much as possible, questionnaires were completed on initial interviews. However, in cases of data deficiency due to non-availability of records or personnel concerned, callbacks were made.

Fieldwork was under the general direction of the regional coordinators who supervised the operations under their jurisdictions. Under the regional coordinator were team leaders who were required to make weekly status reports on the progress of the work. At most, a team was composed of three members. Spot checkers were fielded to determine problem areas and to ensure the reliability of responses from the retrieved questionnaires.

A previously prepared list of replacements was used in substituting sample firms which employed less than five, those that could not be convinced or were too busy to cooperate, and those who had already ceased operations at the time of the survey. Replacements used had the same characteristics as the originally drawn sample.

7.2.4 VALIDITY AND RELIABILITY OF THE FINDINGS

Out of the 940 firms sampled (89 for the government and 851 for the private sector), 777 or 82.66 per cent responded to the survey. Response rates by employment size, by region and by economic activity are given in Table 7.1.

The high response rates could be attributed to the interviewers and coordinators who painstakingly convinced many uncooperative establishments.

To ensure the reliability of the results, editing of survey questionnaires was done with great care. Doubtful and missing responses were checked through callbacks or follow-ups with respondents.

Interpretation of the results of the data collected were done with enough caution so as not to discriminate questions with meagre responses. Only items answered by most of the respondents were given due credit in the analysis. In ranking, no replies were not included in the computation. Ranks were weighted, i.e., the sum of the product of the observed frequencies and its ranks was divided by the total reporting establishments for each variable.

7.3 Characteristics of the Respondents

Of the 777 firms covered by the survey, 84.6 per cent represented the private sector while the remaining 15.4 per cent came from the government sector. A little more than one-half of the respondents (51.5 per cent) were private corporations.

Type of Establishments		*Number*	*Percent*
Government		**120**	**15.4**
National		62	7.9
Provincial		9	1.2
Local		8	1.0
Government-controlled		41	5.3
Private		**657**	**84.6**
Corporation		400	51.5
Partnership		27	3.5
Single Proprietorship		230	29.6
	Total	**777**	**100.0**

Seventy-nine per cent of responding firms were wholly owned by Filipinos while 11 per cent had foreign equity. Ten per cent failed to indicate their type of ownership. It is interesting to note that more than half (55 per cent) of those fully owned by the Filipinos were employing less than fifty workers while 65.5 per cent of firms with foreign equity were employing fifty or more workers. These are shown in the table below.

Type of Ownership	*Count* *Row Pct.* *Col. Pct.* *Total Pct.*	*5-9*	*10-49*	*50-199*	*200 & over*	*Row Total*
All Filipino		104	232	151	124	611
		17.4	38.0	24.7	20.3	78.6
		89.7	85.6	73.3	67.4	
		13.4	29.9	19.4	16.0	

With Foreign Equity	7	23	30	27	87
	8.0	26.4	34.5	31.0	11.2
	6.0	8.5	14.6	14.7	
	0.9	3.0	3.9	3.5	
No Data	5	16	25	33	79
	6.3	20.3	31.6	41.8	10.2
	4.3	5.9	12.1	17.9	
	0.6	2.1	3.2	4.2	
Column Total	116	271	206	184	777
	14.9	**34.9**	**26.5**	**23.7**	**100.0**

Thirty per cent of the respondent firms were engaged in Community and Personal Services. The relatively larger share of this sector was due to the presence of government agencies classified in this sector. Almost one-fifth were engaged in Manufacturing and 13.1 per cent were in the Wholesale and Retail Trade business. It should be noted that the relative proportion of Filipino-owned establishments was large in all sectors. Sectors where significant numbers of establishments are partly owned by foreigners were Mining and Quarrying (25.0 per cent) and Manufacturing (24.8 per cent). (See Table 7.2).

Of the respondent firms in the Wholesale and Retail Trade 34.31 per cent were classified under employment size 5-9 and 42.16 per cent under employment size 10-49. 32.3 per cent of establishments in the Community and Services sector and 37.5 per cent in the Mining sector employed 200 or more workers (see Table 7.3).

About one-third of the establishments sampled were located in Metropolitan Manila, the national capital region. The rest of the regions shared less than 10 per cent each of the total respondents. Also, 43.48 per cent of respondent firms employing 200 or more workers were found in Metropolitan Manila. (See Table 7.4).

7.4 *Methods of Recruitment*

As part of the survey, seven recruitment methods were listed for the employers to rank according to their degree of effectiveness for filling job vacancies with "suitable" employees.

The recruitment methods ranked (1- highest, 7- lowest) were the following :

a. School employment exchanges;
b. Government employment offices;
c. Private employment offices;
d. Media advertisements;
e. Recommendations;
f. Gate hiring; and
g. Company labour unions.

As further evidence on the employers' dependence on the various recruitment methods mentioned above the number of new hires over the previous year or two, through these methods, were also sought. This section discusses the outcome of the rankings as well as the number of new employees hired through the recruitment methods.

7.4.1 DEGREE OF EFFECTIVENESS

The following table shows the degree of effectiveness of the different recruitment methods based on their average ranks:

Methods of Recruitment	*Average Ranks*	*Degree of Effectiveness*	*No. of Rptg. Estabs.*
School employment exchanges	3.978	5	455
Government employment offices	4.109	6	469
Private placement offices	4.348	7	440
Media advertisements	3.241	4	477
Recommendations	2.642	2	598
Gate-hiring	2.323	1	595
Company labour unions	3.162	3	37

It can be gleaned from the table that gate-hiring turned out to be the most effective method of recruitment for most employers with an average rank of 2.32 from 595 reporting establishments. Recommendations came out as the second most effective method. From the experience of the employed graduates reported in Chapter 6, friends and relatives recommendation was found to be the most effective approach for finding employment and company personnel office or gate hiring ranked second. One explanation for this contradiction is the possibility that the employers were not aware of these intermediate processes utilized by prospective employees in applying for jobs. A common intermediate process is for a new graduate to first contact friends and relatives or former teachers and inquire about job possibilities in various companies. The usual response of the person being contacted is to call on friends in various companies for possible job openings and, in turn, to advise the job seeker that there is an opening in said company and to proceed to see the personnel office. In many instances, the recommendee either gets a letter of recommendation or is asked to contact a certain officer in a company who has been informed earlier about the applicant concerned.

Although company labour unions appeared to have been ranked third in effectiveness with an average rank of 3.612, this result may not be reliable since only 37 establishments included this method in their ranking. Media advertisements, on the other hand, had an average rank of 3.241 to place fourth with a total of 477 establishments ranking this method. Surprisingly, the more organized sources of manpower—the school employment offices, government employment offices and private placement offices did not seem to figure prominently, ranking 5th, 6th and 7th respectively as effective methods of recruitment.

Between the two types of establishments, although both agreed that gate-hiring was the most effective, the government establishments ranked the company labour union as the second-most effective, while private establishments seemed to prefer recommendations. Significantly, government employment offices were ranked third for government establishments in contrast to its rank as least effective (7th) among private establishments. Similarly, government esablishments ranked recommendations 6th, while as was mentioned earlier, this was the second-most effective method for private establishments.

The differences among the various employment strata with respect to method of recruitment shows that, except for the small establishments (5-9 employees) which ranked it second, gate-hiring was considered the most effective recruitment method. The smaller establishments seemed to rely more on recommendations, ranking this method first. It is interesting to note that establishments from four regions, including Metro Manila where most of the sample establishments were located, deviated from this pattern of ranking gate-hiring as the most effective recruitment method. Establishments in Central Visayas and Northern Mindanao showed a preference for company labour unions, while in Metro Manila and Southern Tagalog recruitment was mostly from recommendations. Another interesting observation is the fact that establishments from three regions (Ilocos, Central Luzon and Central Mindanao) did not bother to rank company labour unions. This could mean that they did not consider them as a source of manpower or that labour unions play minor role in placing their members.

From the same table, it can be seen that different methods were found effective in the recruitment process, depending on the type of industry concerned. Establishments engaged in Manufacturing and Agriculture found recommendations as the most effective, while those in Electricity, Gas and Water, Construction, Transportation and Communication, and Community and Personal Services ranked gate-hiring as the most successful method of recruitment. The establishments in the remaining three sectors showed a preference for company labour unions.

For establishments which are partly financed by foreign funds, gate-hiring and media advertisements displayed almost identical average ranks with 2.584 and 2.588, respectively. Establishments fully owned by Filipinos similarly ranked gate-hiring as their prime source of personnel (2.278), although recommendations was second with an average rank of 2.596. The higher rank of media advertisements over recommendations for firms with foreign equity indicates a basic difference between the two types of establishments as far as recruitment of personnel is concerned. While the purely Filipino firms tend to be influenced by family and business relations to a considerable extent, companies with foreign interests seem to rely more on their own discretion in the selection of prospective employees.

7.4.2 NUMBER OF NEW EMPLOYEES HIRED

The following table shows the number of new employees hired over the previous year or two through/by recruitment methods:

Recruitment Method	*Number*	*Per cent*	*No. of Rptg. Estabs.*
Total New Hires	**32,380**	**100.0**	
School employment exchanges	1,194	3.7	88

Government employment offices	1,831	5.6	92
Private placement offices	618	1.9	58
Media advertisements	3,907	12.1	153
Recommendations	7,270	22.4	388
Gate-hiring	15,434	47.7	371
Company labour unions	2,126	6.6	46

A total of 32,380 new employees were hired by the respondents over the previous year or two. It can be seen from the above table that 47.7 per cent of these were hired through the gate-hiring method, and another 22.4 per cent through recommendations. A little over 1/10 of the new employees (12.1 per cent) were recruited through media advertisements, while 6.6 per cent were hired through company labour unions. The least number of newly hired employees were through private placement offices, 1.9 per cent.

Out of the total new recruits, 85.6 per cent were hired by private establishments, while the remaining 14.4 per cent by government establishments. Noticeably, the bulk of new employees for both types of establishments were hired through gate-hiring (53.3 per cent of those hired by government establishment and 46.7 per cent of those hired by private agencies). The similarity in the recruitment practices of the two types of establishments seemed to end there, however. For private establishments, almost one-fourth or 24.9 per cent were hired through recommendations, while only 7.8 per cent of those hired by government agencies were recruited through the same method. On the other hand, the recruitment method successful for 13.1 per cent of new hires in the government (government employment offices), was utilized sparingly by the private establishments (4.4 per cent).

Among the various employment sizes of the establishments, only the small establishments (5-9 employees) hired a significant proportion of employees (33.5 per cent) through media advertisements. The medium and large establishments hired most of their employees through gate-hiring.

7.5 Criteria for Selection

The respondents were asked to rank, in the order of their importance the following criteria for selected occupations:

academic records, test results, interview results, work experience, recommendations, social relations, personality, civil status, sex and age. The selected occupations were: Administrative, Managerial and Executive Workers, Clerks and Salesmen and Craftsmen.

7.5.1 COMPARISON OF RANKS OF VARIOUS CRITERIA

The following table presents a comparison of ranks of the various criteria according to selected occupations :

	Adm. Executive & Managerial		*Clerks, Salesmen*		*Craftsmen*	
Criteria for Recruitment	*Ave. Rank*	*Degree of Importance*	*Ave. Rank*	*Degree of Imporance*	*Ave. Rank*	*Degree of Imporance*
Academic record	2.450	2	2.806	2	4.360	4
Test results	3.594	4	3.272	3	3.820	3
Interview results	3.500	3	3.678	4	3.644	2
Work experience	2.204	1	2.381	1	1.784	1
Letter of recommendation	5.982	7	5.833	6	5.561	7
Social relations	5.334	5	5.521	5	5.464	5
Personality	6.107	8	5.963	7	5.565	6
Civil Status	7.451	9	7.359	8	6.802	10
Sex	7.561	10	7.645	10	6.742	9
Age	5.909	6	7.444	9	6.462	8

For all occupations, work experience stood out as the most important criterion for selection. This was particularly evident among the Craftsmen where work experience had an average rank of 1.8 as compared to the second-most important criterion in this occupation which was interview results with an average rank of 3.6. While the first four criteria for the three groups of occupations were ranked fairly close, the ranking differences widened somewhat among the less important criteria. For the clerks and salesmen, the fifth-most important criterion, social relations had an average rank of 5.521 or almost two points behind interview results which had an average rank of 3.578. For administrative workers test results outranked social relations by 1.7 points. The difference between the fourth and fifth rank criteria was not so pronounced for the crafts workers where academic records outranked social relations by 1.1 points.

The rankings for Administrative, Managerial and Executive workers according to the various characteristics of the respondents indicate that work experience was the most important criterion for private establishments and academic record was the prime consideration for the government establishments. The second-most important criterion for private establishments was academic record while for government establishments it was work experience. The least considered recruitment criterion reported by both types of establishments was sex. Except for the large establishments (200 or more employees) work experience was the most important criterion in the recruitment of managers. This was surprisingly ranked second for large establishments while the first ranked was academic record which was second ranked for the other sizes. The smaller establishments (5-49 employees), considered social relations as the fifth most important criterion, while it was age for those employing 50 or more employees.

Among the various industries, practically all sectors took up the pattern for the first four criteria on hiring managers, although there were some differences in the order of priority. It should be pointed out that although age appeared to be the most important criterion for Wholesale and Retail Trades, this should be interpreted with caution since only one establishment in the sector ranked it. It is assumed that work experience is still the prime consideration in this industry since it garnered the second-highest average rank with 2.317. The sectors which considered academic record above work experience were Electricity, Gas and Water, Financing, and Community and Personal Services.

In the case of certain regions, some deviation from the general pattern is noticeable. Establishments in region II, for instance, ranked social relations as the fourth-most important criterion. In Regions III and IV (Central Luzon and Metro Manila), age was ranked as the fifth major consideration in the hiring of Administrative, Executive and Managerial workers, while on the other hand, establishments in several regions (specifically Regions II, V, VII, IX, X, XI and XIX) did not seem to be very particular about the age of applicants for top-level positions, not even ranking it among the criteria for selection.

In the recruitment of clerks, salesmen and related workers the top consideration for private establishments was work experience, which was third in the order of importance for government establishments. The least considered criterion for government establishments was age while for private establishments it was sex.

The small establishments deviated from the larger ones as far as the order of priority for the first four criteria is concerned. The order of priority for those employing 5-9 workers was work experience, interview results, test results and academic record, while it was work experience, academic record, test results and interview results for the larger ones (10 or more employees).

Except for Financing and Community Service establishments, which ranked academic record as the most important criterion, all the other sectors considered work experience as the primary factor in deciding a prospective employee's suitability for clerical and sales positions. Incidentally, establishments engaged in Agriculture, Manufacturing, and Electricity, Gas and Water failed to rank age as a criterion-presumably not considering it as a factor in the selection of clerks and salesmen. There was little deviation from the general pattern in the ranking of the criteria of selection for craft workers.

For establishments with foreign equity, age appeared to be the least important criterion for all occupations, while the all Filipino establishments ranked it eighth for the three groups.

7.5.2 FACTORS IN DECIDING THE STARTING POSITION AND SALARY

Given a set of criteria in deciding a recruit's starting position and salary, work experience emerged as the prime factor for all reporting establishments. Field of specialization ranked second. As expected, these two factors generally are the primary considerations of every establishment in deciding an applicant's starting position and salary. Academic record ranked number three, followed by previous salary, test results and type of school.

Work experience emerged number one in almost all regions; specialization, a close second; academic record and previous salary, third and fourth respectively. Test results were number five in deciding the starting position while nature and location of work ranked fifth in deciding the starting salary of recruit. This is due to the fact that test results mainly determine the general inclinations of recruits, hence, they are given positions fitted to their ability if and when they qualify; whereas nature and location of work are prime factors in the salary scale. Age and physical character also ranked high as determining factors. Civil status and sex were least mentioned which indicates that they are not important in the determination of salary and position.

In Region III the primary criterion was the nature and location of work, departing from the general trend, while Regions IX and XI ranked work experience only as the 3rd determinant, particularly in the starting position, giving more weight to degree of specialization. However, work experience was considered by the two regions in deciding the starting salary.

According to major industry classification, the majority of the industry sectors focused on work experience as a determining factor in the starting position and salary. Degree of specialization was also taken into account. Certain industries, however, deviated from the general pattern. In the utilities sector (Electricity, Gas and Water), Mining, and Community services—specialization was ranked number one. Emphasis was also given to academic record as a determining factor.

Establishments, regardless of size, follow the general pattern in deciding the starting position and salary of a recruit—that is, work experience as the prime factor, specialization as number two. Academic record and previous salary ranked third and fourth. "Test results" was ranked by establishments as the fifth determinant in deciding starting position, whereas in deciding the starting salary, "nature and location of work" was taken into consideration by all the establishments. Specifically, establishments employing 5-9 workers followed the general pattern, however, divergence can be seen with the other employment sizes in the ranking of the other criteria. Age was reported as important by establishments employing 5-9 workers, while those employing 200 and over gave it little significance. Sex was ranked as the least important factor in the determination of starting position and salary.

7.6 Difficulties in Recruitment

As a whole, the respondents do not consider recruitment of employees a problem. Out of 668 reporting establishments 25.7 per cent indicated difficulties in recruitment; of these, 21.5 per cent (37) were government offices and 78.5 per cent (135) were private establishments: this represents 35.6 per cent of government offices responding and 23.9 per cent of private establishments responding.

The highest proportion of establishments with difficulties in recruitment among the different sizes of respondents was registered by those employing 50 to 199 workers where 54 firms (29.3 per cent) out of a total of 184 reporting establishments encountered problems in filling up vacancies. This was followed by the small establishments (5-9 employees) with 26.9 per cent of the respondents having difficulties. Establishments with 10-49 employees had the least difficulty with 22.8 per cent while 25.3 per cent of the large establishments (200 or more employees) met with certain recruitment problems.

The physical location of the establishments appears to have affected the availability of qualified personnel. Fewer establishments encountered difficulties in the urbanized areas than in the other regions. In Metro Manila 20.2 per cent reported recruitment problems; in both the Western and Central Visayas 21.2 per cent of the establishments expressed difficulty in recruiting college graduates. On the other hand, 44.8 per cent of the establishments in Central Mindanao found it hard to recruit qualified personnel; 37.1 per cent of those in Southern Mindanao also had hiring problems. Other regions with significant recruitment problems were Ilocos (34 per cent), Cagayan Valley (33.3 per cent) and Northern Mindanao (31.4 per cent).

Among the various industry groups, establishments engaged in Mining and Quarrying appeared to experience difficulties : 45 per cent of the respondents reported encountering recruitment problems. This was followed by establishments in Community and Personal Services with 33.3 per cent. Establishments in Wholesale and Retail Trade were the least affected, only 11.2 per cent reported difficulties.

7.6.1 REASONS FOR DIFFICULTIES IN RECRUITMENT

The respondents (460) cited various reasons for problems in recruitment. They were asked to rank the following reasons :

a. Lack of qualified manpower
b. No linkage to educational institutions
c. Unable to keep with salary scale of other establishments
d. Cannot meet recruit's demands
e. Lack of necessary know-how for a more effective personnel recruitment/job placement

For all establishments, lack of qualified manpower was the main difficulty. Inability to keep up with the salary scales of other establishments ranked second, while lack of linkage to educational institutions was the third main reason for having recruitment problems. The fourth and fifth ranked reasons for difficulty were lack of know-how for a more effective personnel recruitment process, and not being able to meet the demands of prospective employees. The government offices were more concerned with keeping up with the salary scale of other establishments, while lack of qualified manpower was the main problem of private firms.

Only establishments engaged in Wholesale and Retail Trade did not find availability of qualified manpower as a major area of difficulty, ranking it fourth. The main reason for having recruitment problems in this sector was perceived as a lack of know-how for a more effective recruitment process.

7.6.2 PREFERRED PLACEMENT ARRANGEMENTS

The employers were asked to rank several arrangements for the placements of new graduates. Some of them did not limit themselves to the enumeration in the questionnaire, but considered other arrangements. These were consolidated under the heading "others," and include the placement of new graduates through (a) the mass media, (b) a private placement office, (c) a placement office attached to the employers' company, (d) personal application by the job-seeking graduates. The various placement arrangements proposed, and the corresponding ranks given by the 694 establishments, are as follows:

Placements Arrangements	*Rank*		
	All Types	*Government*	*Private*
1. A placement office attached to each academic department of the school in the employers' area	1	2	1
2. One central office for each school	2	3	2
3. A government placement office	3	1	3
4. A trade union placement office	4	4	4
5. Others	6	6	6
6. There is no need for a placement office	5	5	5

It would seem that, insofar as new graduates are concerned, employers are of the opinion that placements in the labour market could best be undertaken by the entity most knowledgeable about the future employee's academic preparation: the school where the graduates come from. This is evident from the above table which shows school placement agencies being ranked first and second. And as between these two agencies, it appears that the agency more involved in the training of the student should be given the responsibility of effectively placing the graduate in the labour market, as shown by the primary position occupied in the ranking by the placement agency connected to the student's own department.

Another point worth looking into is that employers do not think the ordinary employment exchanges, e.g. private placement agencies and the mass media (advertisements), are suited to new graduates. In fact only a few of the respondents considered these to be good placement arrangements (6.8% for the mass media and 2.4% for the private placement offices). The table also seems to indicate that the employers would prefer no placement arrangement rather than resort to advertisements and private employment offices (included in the "others" category), as shown by the 5th ranking given to the former and 6th to the later. Whatsoever significance this may have should be taken with caution considering that the "others" category was never specified in the schedule and respondents usually would rank only those arrangements spelled out in the questionnaire.

The foregoing general observations are not necessarily true in the case of governmental establishments. These respondents ranked, as may be expected, a government office as the best placement exchange for new graduates. In the breakdown by employment sizes, the rankings indicated in the table were similar except that in the 200 and over employment size a central placement office for the entire school was given a higher consideration than separate placement arrangements for each academic department of the school. The respondents in the agricultural sector considered a government placement office best qualified for the placement of graduates, with the other economic sectors preferring placement arrangements initiated by the schools.

7.7 Training Programmes Offered

The preparation of a new graduate for a specific job plays an important role in "job success." For some employers, mere possession of a college diploma does not ensure an applicants' job suitability. Thus some firms offer pre-employment training for prospective employees. Subsequently, constant improvement and upgrading of skills is an equally important factor for advancement.

In trying to find out the respondents' awareness of and involvement in these aspects of development, they were asked to indicate the types of training their respective companies offer their employees. The responses and their implications are discussed in this section.

7.7.1 PRE-EMPLOYMENT TRAINING

Out of a total of 694 responding establishments 48.7 per cent were offering pre-employment training for prospective employees. For the government firms, an even half were offering training while private establishments had a slightly lower proportion with 48.5 per cent offering pre-employment training. Among the different sizes, the small establishments (5-9) had the lowest proportion offering pre-employment training with 37.4 per cent. This could be expected since the smaller establishments would hardly have enough business to meet the expenses entailed in establishing training programmes. Surprisingly, the establishments employing 10 to 49 workers had a slightly higher proportion offering training programmes (51%), than those with 50 to 199 employees (47.8%). The large establishments had the highest proportion with 53.8 per cent offering pre-employment training.

Among the regions, establishments in Southern Tagalog had the highest proportion (66.7%) offering pre-employment training. This was followed by Ilocos with 62 per cent and Central Luzon (60.8%). Other regions where establishments had a significant proportion offering pre-employment training were Central Mindanao (54.8%), Northern Mindanao (54%), Metro Manila (51.7%), and Western Mindanao (50%). On the other hand, Eastern Visayas had the lowest proportion of establishments offering pre-employment training, with 31.4 per cent, along with Bicol (35.3%), and Southern Mindanao (37.8%).

The highest proportion of firms offering pre-employment training among the various industrial sectors was registered by the Electricity, Water and Gas sector, where 56.8 per cent offered training, and

Financing Institutions with 55.9 per cent offering training for prospective employees. Of the firms engaged in Transport, Storage and Communications 54.5 per cent offered pre-employment training, while 50.8 per cent of those in Community, Social and Recreational Services and one half of respondents in Manufacturing offered training. Agriculture had only 26 per cent offering pre-employment training.

7.7.2 IN-SERVICE TRAINING

Out of a total of 707 establishments responding to the query as to whether they offer in-service training for their employees, two-thirds or 66.6 per cent answered affirmatively. Although only 15 per cent of the responding establishments were government firms, they nevertheless exhibited a higher (89.6%) offering of in-service training as compared to the private establishments (62.6%).

Among the regions, Southern Tagalog topped all other regions with 88.9 per cent of the firms offering in-service training while Central Mindanao had the lowest proportion of firms offering in-service training with 48.4 per cent. In the rest of the regions more than one-half of their firms offer in-service training.

Establishments engaged in Electricity, Gas and Water registered the highest proportion offering in-service training with 83.9 per cent, along with Financing and Insurance firms (82.9%). The lowest proportion of firms offering in-service training were in the Agriculture sector with 46.3 per cent.

As the work force of the establishments grows larger, the proportion offering in-service training increases from 49.5 per cent of those employing 5 to 9 workers to a high 82.4 per cent of those with 200 or more employees. It appears that the size of a firm affects whether there is training for employees to a certain extent. Larger establishments may be more able to afford to train their employees while the smaller ones, although they may realize the importance of such training, may not be able to meet the expenses.

7.7.3 SENDING OF STAFF ABROAD

Of reporting establishments 32.7 per cent signified their willingness to send their staff abroad for training. The government sector again displayed more willingness (68.2% of respondents), while 24.3 per cent of the private offices said "yes".

In all the regions, the "no" answer always dominates. It is highest in Southern Tagalog, Eastern Visayas and Western Mindanao. However, in Bicol and Metro Manila, at least 45.5 per cent and 43.2 per cent respectively are willing to send employees abroad.

Again, in none of the industrial sectors did the rate of "yes" answer appear greater than the "no". But of the total number of firms who gave positive response, 42.4 per cent of those in Community and Personal Services appear to be willing to send their staff be trained abroad. Also, out of the 14 responding firms involved in Mining and Quarrying, 6 (or 42.9%) would do so.

It is interesting to note, too, that a very low percentage of the firms with 5-9 employees approve of availing the staff with training outside the country. It is evident that as the size of the company increases, the rate also increases, so that for firms employing 200 employees or more, the rate of "yes" increased to 55.3 per cent.

From this we can deduce that at this time firms, especially private ones, still do not believe that the cost of sending employees abroad can be duly compensated by the knowledge that the potential trainees may acquire from training abroad and consequently, use in their jobs.

7.7 4 SUMMER JOBS FOR STUDENTS

Only a little over one-fourth of the respondents were offering summer jobs to students to enable them to gain experience before graduating from college. The government establishments registered a higher proportion, with 36.6 per cent offering summer jobs, than the private firms with 26.3 per cent.

The involvement of the respondents in preparing future employees for their jobs appeared to be affected by the size of the firm. An increasing trend in the proportion of firms offering summer jobs for students as the establishment gets bigger can be observed.

Among the different regions, Southern Tagalog registered the highest proportion of firms offering summer jobs for students with 38.9 per cent, followed by Cagayan Valley with 36.8 per cent. Surprisingly, except for Northern Mindanao which registered the third lowest proportion, a relatively high percentage of firms in the Mindanao area were offering summer jobs for students.

From the breakdown by main economic activity, it can be seen that almost one-half of firms engaged in Electricity, Gas and Water were offering summer jobs, compared to less than one-sixth or 16.2 per cent of those engaged in Construction. Other industries with a significant number of firms offering summer jobs for students were Mining and Quarrying (36.8%), Community Services (32.9%) and Financing (29.7%).

It is interesting to note that firms with foreign equity appeared to have a more positive attitude towards helping college students in getting prepared for jobs than those wholly owned by Filipinos. Around one-third (32.9%) of firms with foreign equity were offering summer jobs as against 27.9% for "All-Filipino" firms.

7.7.5 INTENTIONS TO START TRAINING

Upon learning which of the firms offered training to employees, the next question directed to those who answered in the negative was whether they intended to start training. Out of 212 establishments who responded, only 21.7 per cent professed intentions to do so.

Between the answers given by the government agencies and the private firms, there is a striking difference. Of the former, 54.5 per cent as compared to the 19.9 per cent of the latter, expressed the intention to start training.

Of the firms who responded (24.6%) in Mindanao, a little over one-fifth in Visayas and one-fifth in Luzon responded "yes". It is among firms in Western Visayas (50%), Cagayan Valley (40%) and Central Luzon (35.7%) that the rate of interest is highest. Those in the Bicol and Southern Tagalog regions are definitely not in favour of this.

By economic activity, Electricity, Gas and Water (50% of firms involved in this activity), Mining and Quarrying (42.9%), Community and Personal Services (32.3%) are the three sectors most interested in starting training while those in Agriculture (3.6%), Manufacturing (14.3%), and Transportation and Storage (19.0%) are the least interested.

But if we were to see which of the firms by employment size are more eager to give training, we would find that firms with 200 or more employees top the list. Of the 27 responding firms belonging to this size, 37.0 per cent (or 10) intended to start training. This is followed by those with 50-199 employees where the rate registered 23.2 per cent. It is clear, then, that firms belonging to small employment sizes (firms with less than 50 employees) are more hesitant to give training opportunities to their employees.

Another point which is of interest is to know when the firms intend to start offering training. Of the 21 responding firms 38 per cent were still undecided (25% of which were government firms and 75% of which were private ones). It is surprising to note that the number (23.8%) who plan to give training within 1978 is equal to those who intend to train in 1979. Equal percentage of 4.7 per cent intended starting next year, the year after next, and 10 years after. This may indicate that most firms would only start to give training when they would be completely ready with their training facilities, personnel and other preparatory materials.

7.7.6 REASONS FOR WANTING TO START TRAINING PROGRAMMES

From a total of 34 firms (6 government and 28 private entities) who realized the importance of training and who feel they ought to offer it, three major reasons emerge. 61.8 per cent intend to give training to upgrade the skills of employees; 32.4 per cent, to maintain quality; and a small 5.9 per cent, to give incentive to employees. The reasons given by the firms in the different employment sizes also reflect this order.

For half of the responding government firms, the primary reason for intending to start one is to maintain quality followed by upgrading of skills. We find the reverse for the private establishments: 67.9 per cent (or 19) of these believe that training is necessary for upgrading of skills and 28.6 per cent (or 8 firms) think it is important to maintain quality. Only two firms (one government and one private) reported it is a good incentive for employees.

Each of the sample firms in Agriculture, Financing and Insurance and a majority of those in Wholesale and Retail, Transportation and Storage, Community and Personal Services offered training to employees to upgrade their skills; while two-thirds of those involved in Mining and Quarrying and in Electricity, Gas and Water did so to maintain the quality of their work. Construction firms were divided between giving training for upgrading skills and for maintaining quality.

7.7 *Reasons for Not Wanting to Offer Training*

For some 51 firms training is not desirable. Each of the 4 government agencies who answered this question offered a different reason: (a) financial incapacity; (b) difficulty to recruit training personnel; (c) absence of such training provision in company policy; and (d) the cause of having others conduct the training.

Whereas, for the private establishments, an estimated rate of 31.9 per cent (or 15 firms) believe that training is not necessary as the jobs do not need skills; 21.3 per cent (or 10 firms) reasoned they could not afford to offer such for lack of funds; 8.5 per cent (or 4 firms) are aware of the difficulty in recruiting training personnel, another 8.5 per cent asserted the absence of such provision in office policy; and the rest of the firms enumerating other reasons rendering the giving of training impossible.

Most firms with less than 200 employees reported they do not need skills as the reasons for not offering training. Another reason is the lack of funds to cover the cost of training. One-third of the firms employing 200 or more employees gave lack of facilities as their reason.

Those who refuse to offer training, mainly because they do not need skills, are the firms involved in Manufacturing, Construction, Wholesale and Retail and approximately half of the Transportation and Storage establishments. One-third of firms dealing with Community and Personal Services and the lone-respondent firm in Electricity, Gas and Water lack training personnel. One-half of those in Mining and Quarrying maintain that there is no provision for training, while 36.4 per cent of Agricultural firms and half of those in Transportation and Storage assert they lack funds to shoulder training costs. Each of the three Financing and Insurance firms, however, attribute their unwillingness to offer training to one of the following reasons : lack of funds, training by others, and skill is already acquired on-the-job.

7.8 *Making an Employee's Job Satisfactory*

The attitude of employers towards their employees depends on what the former think may be the outlook of the latter towards the establishment and conditions and prospects in the establishments. While employment policies are the prerogatives of the employers, they are nonetheless aimed at meeting the demands and expectations of the employees. For this reason, it is desirable to know the opinions of the employers on certain things which may be vital to the status of the workers. The employers were asked to give the relative-degrees of importance of several factors which they thought would be important to the employees in making their jobs satisfactory. The degrees of importance were : (1) Extraordinarily important, (2) Very important, (3) Important, (4) Barely important, and (5) Not important. The factors and the degrees of importance attached to them are as follows:

a. Opportunity to travel — Not important
b. Opportunity for further studies and development — Important
c. Better prospects — Important
d. Use of specialization — Very important
e. Lucrative income — Very important
f. Self-fulfilment — Very important
g. Utilization of special talents — Very important
h. Security of tenure — Very important
i. Good working environment — Very important

The greater portion of the respondents belong to the private sector; it would not be a hasty generalization to state that the above considerations were also followed by the private employers. On the government side, some variations were observed. For instance, while "opportunity to travel" was considered by the private employers, as a whole, not important in making the jobs of employees satisfactory, the governmental employers thought it an important factor. "Opportunity for further studies and development" and "better prospects" were rated very important, while "self-fulfilment" was deemed an extraordinarily important factor.

The employers in the 200 and over employment size made some concession to the importance of opportunity to travel. But even then, this factor was considered barely important. Opportunity for further studies and development was perceived a very important aspect in employee satisfaction in establishments employing 50 or more workers. "Better prospects" was very important in the 200 or more employment size. Employers in the 5-49 employment scope tagged self-fulfilment as important whereas among larger firms self-fulfilment was a very important factor. In all of these, it is interesting to note that, whether by type of employer or by employment size, a lucrative income was never considered extraordinarily important by the majority of employers. Higher income is not the primary factor that would make employees satisfied with their jobs. As shown above, employers think other things are just as important.

To sum up, this chapter has given us an important insight into the preferences and attitudes of the employers towards the educational system as a whole, and the graduates in particular. This valuable information could be utilized to narrow the gap between industry and the higher education system.

One important factor observed was the apparent ineffectiveness of the organized placement programmes in providing qualified manpower for job openings. While it is true that complete assurance of a prospective employee's "job success" depends on a number of factors, including an employee's attitude towards the employer and the job conditions prevalent in the working environment, a closer correspondence between the employers and organized placement programmes (school placement office, government and private employment agencies) would certainly prune down the applicants to the "most qualified," thus lessening hiring mismatches.

Another important observation is that the foremost criterion for selection of an employee is work experience. This is the main difficulty faced by new graduates in their bid to join the productive portion of the population. As was observed in Chapter 6 of this study, the waiting time for graduates in securing a job reached two years in some cases. It would indeed be a big boost to the graduates' employment chances if the educational institutions in the country could be encouraged to give more emphasis to work-oriented curricula to enable students to gain the work experience valued highly by the employers.

The employers did not seem to have much difficulty in the recruitment of college graduates, indicating an ample supply of manpower. The firms which encountered difficulties, however, seemed to think that the quality of manpower available did not suit their demands. This further stresses the need to develop curricula which would enable students to be exposed to working conditions that they might encounter when they eventually are employed.

A closer linkage between the education authorities and the employers in developing a better curricular programme is therefore encouraged and could perhaps be one of the main thrusts in the development of higher education in the country.

Table 7.1 *Distribution of Sample and Respondent Establishments by Employment size, by Region and by Economic Activity*

Employment Size/Region/Main-Economic Activity	*Sample**	*Respondent**	*Per Cent*	*Non–Respondent**	*Per Cent*
Total	**940**	**777***	**82.6**	**163**	**17.4**
Employment Size					
5–9	120	116	96.7	4	3.3
10–49	303	271	89.4	32	10.6
50–199	232	206	88.8	26	11.2
200 or more	285	184	64.6	101	35.4
Region					
Ilocos and Cagayan Valley	77	74	96.1	3	3.9
Central Luzon	87	68	78.2	19	21.8
Metro Manila, Southern Tagalog and Bicol	363	298	82.1	65	17.9
Western Visayas	66	39	59.1	27	40.9
Central Visayas	77	76	98.7	1	1.3
Eastern Visayas	56	53	94.6	3	5.4
Western Mindanao	47	35	74.5	12	25.5
Northern Mindanao	58	51	87.9	7	12.1
Southern Mindanao	64	50	78.1	14	21.9
Central Mindanao	45	33	73.3	12	26.7
Main Economic Activity					
Agriculture, Hunting, Forestry & Fishing	77	57	74.0	20	26.0
Mining and Quarrying	39	24	61.5	15	38.5
Manufacturing	207	153	73.9	54	26.1
Electricity, Gas and Water	45	38	84.4	7	15.6
Construction	53	39	73.6	14	26.4
Wholesale and Retail Trade	124	102	82.3	22	17.7
Transport, Storage and Communication	74	58	78.4	16	21.6
Financing, Insurance, Real Estate & Business Services	87	74	85.1	13	14.9
Community, Social, Recreational and Personal Services	234	232	99.1	2	0.9

* Includes government sector.

Source : 1. 1975 Economic Census of Establishment, National Census and Statistics Office.
2. Office of Compensation and Position Classification.

Table 7.2 *Number of Respondents by Main Economic Activity and by Type of Ownership*

Type of Ownership	*Main Economic Activity*									
	Agriculture, Hunting, Forestry & Fishing	*Mining and Quarrying*	*Manufac–turing*	*Electricity, Gas and Water*	*Construc–tion*	*Wholesale and Retail Trade*	*Transport, Storage & Communica-tion*	*Financing Ins. & Real Est. Bus. Svc.*	*Community & Personal Services*	*Row Total*
All-Filipino	55	14	110	32	35	89	49	59	168	611
	9.0	2.3	18.0	5.2	5.7	14.6	8.0	9.5	27.5	78.6
	96.5	58.3	71.9	84.2	89.7	87.3	84.5	79.7	72.4	
	7.1	1.8	14.2	4.1	4.5	11.5	6.3	7.6	21.6	
With Foreign equity	1	6	38	4	2	10	5	10	11	87
	1.1	6.9	43.7	4.6	2.3	11.5	5.7	11.5	12.6	11.2
	1.8	25.0	24.8	10.5	5.1	9.8	8.6	13.5	4.7	
	0.1	0.8	4.9	0.5	0.3	1.3	0.6	1.3	1.4	
No data	1	4	5	2	2	3	4	5	53	79
	1.3	5.1	6.3	2.5	2.5	3.8	5.1	6.3	67.1	10.2
	1.8	16.7	3.3	5.3	5.1	2.9	6.9	6.8	22.8	
	0.1	0.5	0.6	0.3	0.3	0.4	0.5	0.6	6.8	
Column Total	57	24	153	38	39	102	58	74	232	777
	7.3	3.1	19.7	4.9	5.0	13.1	7.5	9.5	29.9	100.0

Table 7.3 *Number of Respondent Establishments by Major Economic Activity and by Employment Size*

Employment Size	Total Row Pct. Col. Pct.	Main Economic Activity								
		Agriculture	Mining	Manufacturing	Elec., Gas and Water	Construction	Wholesale and Retail	Trans., Storage & Comm.	Financing, Insurance	Govt. Community & Personal
Total	777	57	24	153	38	39	102	58	74	232
	100.0	7.34	3.09	19.69	4.89	5.02	13.13	7.46	9.52	29.86
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
5-9	116	8	3	27	1	4	35	5	8	25
	100.0	6.90	2.59	23.28	0.86	3.45	30.17	4.31	6.90	21.55
	14.93	14.04	12.50	17.65	2.63	10.26	34.31	8.62	10.81	10.78
10-49	271	22	6	50	13	16	43	28	27	66
	100.0	8.12	2.21	18.45	4.80	5.90	15.87	10.33	9.96	24.35
	34.88	38.60	25.0	32.68	34.21	41.03	42.16	48.28	36.49	28.45
50-199	206	11	6	39	17	12	16	15	24	66
	100.0	5.34	2.91	18.93	8.25	5.83	7.77	7.28	11.65	32.04
	26.51	19.30	25.0	25.49	44.73	30.77	15.69	25.86	32.43	28.45
200 or more	184	16	9	37	7	7	8	10	15	75
	100.0	8.70	4.89	20.11	3.80	3.80	4.35	5.43	8.15	40.76
	23.68	28.07	37.5	24.18	18.42	17.95	7.84	17.24	20.27	32.33

Table 7.4 *Number of Respondent Establishments by Employment Size and by Region*

Region	*Col Per cent* *Row Percent*	*Total*	*Employment Size*			
			5-9	*10-49*	*50-199*	*200 & up*
Ilocos		53	9	20	18	6
		6.82	7.76	7.38	8.74	3.26
		100.0	16.98	37.74	33.96	11.32
Cagayan Valley		21	5	6	6	4
		2.70	4.31	2.21	2.91	2.17
		100.0	23.81	28.57	29.57	19.05
Central Luzon		68	8	23	20	17
		8.75	6.90	8.49	9.71	9.24
		100.0	11.76	33.82	29.41	25.00
Metro Manila		257	32	84	61	80
		33.08	27.59	31.0	29.61	43.48
		100.0	12.45	32.68	23.74	31.13
Southern Tagalog		22	2	13	2	5
		2.83	1.72	4.80	0.97	2.72
		100.0	9.09	59.09	9.09	22.73
Bicol		19	3	6	4	6
		2.45	2.59	2.21	1.94	3.26
		100.0	15.79	31.58	21.05	31.58
Western Visayas		39	10	12	9	8
		5.02	8.62	4.43	4.37	4.35
		100.0	25.64	30.77	23.08	20.51
Central Visayas		76	15	30	16	15
		9.78	12.93	11.07	7.77	8.15
		100.0	19.74	39.47	21.05	19.74
Eastern Visayas		53	10	21	75	7
		6.82	8.62	7.75	7.28	3.80
		100.0	18.87	39.62	28.30	13.21
Western Mindanao		35	4	18	7	6
		4.50	3.45	6.64	3.40	3.26
		100.0	11.43	51.43	20.00	17.14

Northern Mindanao	51	6	14	22	9
	6.56	5.17	5.17	10.68	4.89
	100.0	11.76	27.45	43.14	17.65
Southern Mindanao	50	5	13	16	16
	6.44	4.31	4.80	7.77	8.70
	100.0	10.0	26.0	32.0	32.0
Central Mindanao	33	7	11	10	5
	4.25	6.03	4.06	4.85	2.72
	100.0	21.21	33.33	30.30	15.15
Total	777	116	271	206	184
	100.0	100.0	100.0	100.0	100.0
	100.0	14.93	34.88	26.51	23.68

Chapter 8

Implications for Planning Higher Education in Relation to Employment

8.1 Introduction

To derive from this study implications for planning of education in general, and higher education in particular, it is important to examine what kind of Philippines we would like to see in the future and what role education could play in this. In the Philippines, education has been assumed to play an important role in the development of the country. For education to continue to perform this role effectively, it must have a forward focus so as to align educational programmes to enhance developmental objectives. With the knowledge of what is forthcoming, one is able to make adjustments such that improvement in the quality of life is appreciated by those who benefit from development. And education, for that matter, must respond to developmental needs in order to negate the question of its irrelevance.

Several indicators of development have been suggested by economists, sociologists, political scientists, etc. To the economists, improvement in income distribution, increasing real per capita income and betterment of the people and their environment represent some indicators of development. On the other hand, sociologists view development as any positive change in social structure and institutions. Political scientists relate development to an increasing political maturity and consciousness of the people, and their capacity to participate in deciding who gets what, when and how.

The social indicators project of the Development Academy of the Philippines (Mangahas, 1976) identified the following aspects of development :

1. Health and nutrition
2. Learning
3. Income and consumption
4. Employment
5. Non-human productive resources
6. Social mobility
7. Political values
8. Housing, utilities and environment
9. Public safety and justice

On health and nutrition, the indicators used are daily caloric intake, protein supply, life expectancy and infant mortality. Over the years, infant mortality has improved, but the present mortality level of 67 per 1,000 is still above those prevailing in developed countries of 15 per 1,000. On life expectancy, there has also been a marked improvement from 30 years in 1918 to 60 years today, but this is still below the US life expectancy of 71. Average daily caloric intake and protein supply are now approximating the minimum requirement of 2,187 calories and 54.4 grams of protein, per person.

Income growth rate of 6 per cent a year and real per capita growth of 3 per cent are well above the economic performance of most countries. However, they fall below the economic miracles in Taiwan and South Korea. Further analysis of growth has revealed that the net beneficial product, i.e., excluding from consumption government expenditures which are non-directly beneficial, is much smaller than income growth and it is widening due to the accumulation of investments that diminish final consumption. Partly because of this, poverty has worsened in both the Greater Manila area and the rural areas. What has improved slightly is the poverty situation in the non-Manila urban centres, where the proportion of those below the food threshold has declined from 27 per cent in 1965 to 24 per cent in 1971.

In the Greater Manila area, the proportion of families who fall below the food threshold increased from 17 per cent in 1965 to 25 per cent in 1971; while in the rural areas the figure rose from 39 per cent in 1965 to 48 per cent in 1971. Likewise, the gap between the rich and the poor has increased such that the richest 20 per cent enjoy an income nearly triple the average while the poorest 20 per cent get only 1/5th of the average income. On the other hand, using 1965 as base year, real wages have decreased to P. 83 per month for skilled and P. 90 per month for unskilled. Thus, improvements in the employment situation have been neutralized by the erosion of real wages.

The quantity and quality of manpower resources have improved. Using the participation rate as an index of improvement, one can observe the marked increase from 8 per cent in 1950 to near 20 per cent in 1970-77 for tertiary education, 26 per cent to over 60 per cent for secondary education and from 80 per cent to 100 per cent for elementary education. What is alarming is the educated unemployed, especially among the college dropouts where unemployment is highest.

On the non-human productive resources, growth has been phenomenal. Using 1955 as the base year, physical capital increased from P. 15.4 billion in 1950 to P. 62.6 billion in 1973. Mineral ore reserves have increased due to discovery of new deposits. Substantial exploration missions and development work will further increase the possibilities for the discovery of more non-human productive resources, including oil and other mineral resources.

It has been proposed in the development plans that growth of national income be sustained at 7.5 per cent up to 1980 and 8 per cent until 2000. This means that, at 1972 prices, the 1976 GNP of P. 72.918 billion will increase to P. 164.879 billion in 1987. Likewise, real per capita income will increase from P. 1,667 in 1976 to P. 2,752 in 1987. The effects of this income target on economic sectoral areas will include : (1) the growth of industry will be such that by 1979, agriculture and industry will have equal shares of national income; (2) by 1987 industry will be a dominant sector of the economy; and (3) in spite of the growth of industry, agriculture, fishery and forestry will remain as the solid base of the economy providing the required inputs for growth spearheaded by industry and manufacturing sectors. With these perspectives in view, we shall try to examine the implications for planning higher education.

8.2 Implications for Planning Higher Education

To draw the implications for the planning of higher education in the Philippines from this study, we must first examine the role that planning has played in the development of higher education in the country. Although several commissions and research agencies have investigated the structure and organization of the system of education to make it consistent with the overall development strategy of the country, an educational plan, as such, has yet to be prepared which will delineate the objectives of education and discuss sets of possible alternative programmes to achieve the objectives and implementation of selected programmes. Insofar as the development of education in relation to employment is concerned, progress is much less evident. It has been noted from our study that development of higher education until recently has been based mostly on the individual demand for higher education. Since resources were limited these programmes, which were inexpensive to establish, grew much faster in the face of less probability of absorption of the graduates in the employment market. The reason for this social demand was the meagre employment possibilities available after graduation from the lower levels of education. Even in cases where students were charged fees, the rate of private return to a college degree of four years and more has been observed to be higher than the same rate for a lower degree or diploma.[1] Higher education is still a profitable activity in the Philippines for an individual.

This is partly due to government subsidies to establishments of higher education, financial contributions from non-government foundations, and to the salary structure in the employment market which is oriented towards length of studies rather than towards the type of training. Although these rates of return are far from accurate estimates of the comparison between costs and benefits of higher education, they give some valid explanation for why individual demand for higher education in the country is high.

From the country's viewpoint, however, the situation is definitely less profitable. The rates of return to higher education are indeed less than those from other types of investment over and above the prevalent unemployment in the country and its serious social consequences. It is clear from this study that the problem of unemployment is not going to decline in the near future. An estimated 70,000 college graduates in 1978 were unemployed; this is expected to increase to 95,000 in 1982 if the economy grows at the same rate as in the past (see Chapter 4).

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1. See *Sharing in development —the Philippines*, ILO, 1974, Table 66, p. 315.

The situation is alarming. Could planning for higher education and employment help to reduce this problem? The results of the study give some affirmative indications. It has been observed that the problem of unemployment is more acute in certain fields of studies than in others; there are even shortages in certain fields. It has also been observed that one of the reasons for unemployment is the lack of correspondence between the content of education and the needs of the job. The selection criteria and methods of recruiting college graduates also need improvement. Placement services and career guidance facilities are inadequate. Information about job vacancies is not yet properly institutionalized. The salary structures of different professions are not matched with the development priorities of the country. The country's resource potentials, particularly in the fields of energy, agriculture and water, have not been exploited to the desirable extent. In rural areas the utilization of skills for economic development has lagged. It was also observed that no estimates of needs for skills identified by fields of studies are available; these could provide some rough indications for the direction to take in the development of higher education in quantitative terms. What do they imply for planning of higher education? The following sections will deal with these issues.

It appears to us that the objectives developed in the development strategy of the five-year plan to achieve self-sufficiency in agricultural and other basic commodities, to develop water resources, to exploit the sources of energy, to diversify the economy by developing the industrial sector and increasing the transportation network call on the decision-makers of higher education to assist in the achievement of these objectives. Without rationally developed human resources, it would be impossible to execute these programmes and projects. We should be asking: is the system of higher education producing the types of skills needed to implement these projects successfully? Will they be available in time? Will the graduates accept jobs in places where they are most needed? Do the development priorities provide the necessary incentives to the graduates to encourage them to implement these tasks successfully and with a sense of dedication? To answer these questions it would be necessary for the system of higher education to have precise information on the role they could play in supplying these skills. The estimates of needs for skills for each project are therefore required with sufficient lead time to prevent bottlenecks in the implementation of the projects. At present, there is no surplus of engineers in the country, nor is the distribution of such educational facilities equitable all over the country to meet the needs of each region. On the other hand, many liberal arts graduates and commerce graduates are emerging from the system and the labour market cannot absorb them. With an educational plan related to the estimated skill requirements of the economy, the institutions of higher education could be in a better situation to respond to the needs of the economy in time.

Some of the jobs require highly specialist training, others need some specialized training and some general training, again others require no specialized training at all. A classification of such jobs according to the requirement of specialization would help formulate training programmes. We have analysed the flexibility of the labour market and the study programmes in their capacity to adjust to each other. Such information is crucial to the decision-makers of higher education to reduce the unemployability of some graduates.

The study has observed that the effectiveness of the career counselling system is inadequate. Often students make their decisions in a vacuum of information (see Chapters 5 and 6). This has implications for planning higher education, since a system of higher education is not complete without a mechanism of career information for its students and without some arrangements for placing its graduates. At present, 'personal contacts' play an important role in the recruitment of graduates and the employers find this method effective (see Chapters 6 and 7). This shows what a tremendous effort has to be made to rationalize the selection of graduates for jobs. Employability of a graduate is going to remain limited if the selection process does not become more objective. The graduates from weaker sections of the society have little chance of getting jobs at the present time. Unfortunately, it is not the domain of higher education, but a part of the national employment policy. The development strategy has put considerable emphasis on agriculture, but the latter is one of the least popular fields of study (see Chapter 6) because the salary structure does not reflect the development priorities. Therefore, it is not only the employment policy but the salary structure as well which need to be re-organized.

Income, however, is not the most important characteristic of a job that attracts graduates, it is also the utilization of their skills and conditions of work which are important (see Chapter 6). This means that either the job structure requires orientation or the content of higher education requires re-adjustment with actual needs of the job. This can be done only with the co-operation of the employers, and it has been observed in the study that employers are more than willing to co-operate with institutions of higher education in this respect (see Chapter 7). This has implications for planning the organization of contents and methods of instruction.

It may be useful to explore alternative means of providing higher education. There is a sort of consensus that formal study programmes coupled with work experience as part of the educational programme is the most effective way of adjusting a graduate to the world of work as the situation exists in the country. This means that the planners of higher education should explore the feasibility of adopting such training programmes, not only in the professional fields of studies, but in other fields as well.

From the findings of the present study, one notes that the pressure of the flow from primary schools to secondary schools is expected to stabilize and will be dependent only on the demographic characteristic. The flow of students from the secondary to the institutions of higher learning will increase if control is not applied. If employability becomes one of the major expectations of the student and also of the society, perhaps there is some rationale to control and re-orient the flow of students according to the expected employability estimated from manpower demands. One might argue that this will only shift the problem of employment from university or other college graduates to secondary school graduates. But, there are several disadvantages in having unemployed graduates at the university or college level rather than at the secondary level. First, the resources involved in having an individual in college are higher and the social return is less. Second, the expectations of college graduates are higher than those of secondary school graduates. Third, the flexibility of the training vis-a-vis the employment market reduces as the level of training increases. The job market for secondary school leavers is more adaptable than for college graduates. Fourth, the political stakes are higher in the case of unemployment of college graduates than in the case of secondary level graduates. All these would suggest restricting enrolment in higher education, particularly in the areas where there is unemployment, and diverting the amounts of money thus saved to setting up labour-intensive industries in areas where they are needed. Following this argument, the country has already taken some action in reducing admission to the institutions of higher education with the establishment of the NCEE.

Looking at the results of this programme, it would be advisable to focus on the socio-economic background of the students. At present, children of higher social and economic background and from urban areas have a better chance of entering college. Some might argue that change in this could reduce the quality of education, but experience has shown that bad performance on this kind of examination is not only due to academic deficiency but also to lack of experiential background which a child from an urban, well-to-do family is privileged to have. Such deficiency often disappears with time in college. So, it is very probable that quality of education will not suffer with the introduction of some accommodations to socio-economic and residential background. This should also apply to the choice of fields of studies. It has been observed that those subjects which are least popular on the average, namely agriculture and teacher education, are taken up by students from limited socio-economic backgrounds. Some corrective measures in this direction could increase social mobility and reduce perpetuation of the social structure. The cut-off points in the NCEE should also be free from arbitrary fixation; they should be established on the basis of estimates of employability.

In respect of the wastage in the different fields of studies in the form of drop-outs, two fields of studies distinguish themselves from others with very high rates in the private sector colleges. These are engineering and teacher education. The former is due to stricter requirements from the academic point of view, and the latter because this field is unpopular. Only one out of three students has a chance to complete these courses. From the planning viewpoint, the situation is alarming and corrective action is necessary to reduce this wastage either by checking more thoroughly on the academic requirements before entry or by making proper information available about career possibilities in the case of teacher education. Since incomplete education does not have any monetary value in the Philippines, and since private education is mostly financed by tuition fees, a lot of money could be saved by the students and the facilities could be used for more productive purposes.

The wide difference in respect of cost per student between private and public institutions of higher education is alarming. Even the medical colleges in the private sector have much lower cost per student (about one-third) than the University of the Philippines. This appears to be a management problem. Although the University of the Philippines is the most élite university complex in the country, such a cost difference does not help achieve socialization within the educated group. On the other hand, the heavy reliance on tuition fees (92% as revealed in our study) for financing of the private universities is one of the many causes of problems plaguing private education. It has influenced decisions as to what courses to offer from the institution's economic point of view rather than in view of the country's needs, thereby leading to duplication of popular but inexpensive courses in the same locality. This has led to overcrowding of enrolment in inexpensive courses such as commerce and liberal arts. The State higher education system has had to bridge the gap by opening up courses which are more relevant to economic needs regardless of costs. The private sector has responded to the individual demand for higher education and the State system to the national demand, although in a very small way so far. What is needed, therefore, is a better coordination of the two sectors of higher education with significant structural changes in respect of course offerings, methods of instruction, process of selecting students and organization so as to meet the national development requirements as well as individual expectations. The State system has to overcome partisan policies, which regard the establishment of such institutions in their respective constituencies as a political monument to achievement, and concentrate more on the overall national objectives, which are equity, provision of basic needs to the entire people, meeting the manpower needs for qualified manpower and provision of employment to as many graduates as possible.

To distribute the benefits of development among the different regions and social groups in a more equitable manner, it is necessary that educational opportunities are made available to all regions and social groups. Our study demonstrates that seven out of thirteen regions accommodated only 25 per cent of the total student population of the institutions of higher education. On the other hand, Metro Manila alone enroled two-thirds of the total student population. This regional imbalance has to be rectified if exodus towards Manila is to be reduced and if employment possibilities are to be spread to the different regions. Of course, setting up of institutions without due consideration of the regional economic potential for development would only contribute to increased unemployment and migration towards the developed regions. Such institutions should provide programmes which would provide skills for local economic development so that employment could be assured. This would need departure from the traditional ways of building colleges or universities.

At present, higher education in the Philippines is more or less restricted to the higher income group. This is because of the dependence of the private sector of higher education on tuition fees as has been mentioned before. Since the national policy aims for a better distribution of educational opportunities, scholarship programmes should be established for suitable students of poor background. We have mentioned before some weighting arrangements for scoring at the NCEE based on social and economic background of the students. It is necessary that the validity of the NCEE is established beyond doubt with an extensive and intensive data base. At the moment, data should be available for a sufficiently large number of years for this purpose. The above implications for planning would lead to a strategy for the development of higher education which is elaborated below.

8.3 Conclusions for Strategy

8.3.1 THE SITUATION

We may then summarize the situation in the Philippines as follows:

1. It is socio-economically under-developed so that there is a very uneven distribution of wealth.
2. The population is so structured that 70 per cent of the people are under 25 years of age (with all the consequent social implications).
3. Educationally, while there may be a great percentage of the relevant age-groups in schools, quality in general is rather poor, although the government is now taking impressive measures to improve the quality of basic education. The Philippines is one of the first four nations in the world insofar as enrolment ratios in post-secondary institutions is concerned. This, however, is primarily because the economic situation has not been sufficiently developed so that high school graduates can enter the

labour force. In the Philippines, because of the absence of job opportunities, most high school graduates seek entry into institutions of higher learning.

The labour market situation therefore, as summarized in the previous chapters, has the following characteristics :

a. Those who are employed seem satisfied with their jobs, perceive themselves as having a chance for upward mobility.
b. Many employees and employers think that persons are overqualified for their positions, again this is due to the under-development of agriculture and industry.
c. There is a considerable export of trained manpower (teachers, doctors, nurses, accountants, and technical manpower) to other countries.
d. There is widespread under-employment especially in rural areas, which paradoxically occurs at the same time that there are many who take more than one job in order to increase their income.

8.3.2 THE STRATEGY

In the face of this situation, it would seem clear that the leadership in the country has embarked on a correct policy for employment generation.

a. Both on the national and regional levels, plans for the development of both the agricultural and industrial sectors as well as the accompanying service sectors are being mapped out. Great emphasis is being placed on the development of the natural resources of the country. The dictum is that unless these industrial and agricultural enterprises are developed, there will not be enough jobs for the still growing population. It is true that in order to develop these natural resources, we need trained human resources. But as in the chicken and egg situation, the two must go together. In fact, the Philippines today may be characterized by the fact that the number of trained personnel surpass the number of job openings.
b. With these national and regional development strategies as a background, we can then address ourselves to the mechanism

by which higher education can respond to the labour market demands.

As was presented in the chapter on the developments in higher education in the Philippines today, there seems to be no effective mechanism for controlling the number of those who pursue programmes in higher education.

There is now a consensus among national development and educational authorities that some rationalization will have to be introduced.

8.3.3 THE MECHANISM

A Board or Commission of Higher Education will be organized to be assisted by a number of technical panels for each of the main professional areas.

These panels will have the following purposes :

1. To estimate the numbers of graduates needed in the various professional areas, for example, civil engineers, mechanical engineers, chemical engineers, etc. These estimates will be based on the development programmes of both the regional development councils and the national development council.

   Based on these estimates, these technical panels will then set the standards for curriculum, faculty, facilities, etc. of the various institutions of higher learning. Furthermore, these panels will recommend budgetary outlays for State education and various forms of assistance for private education.
2. Restructuring, rationalizing tertiary education through a planned system of incentives, co-ordination and assistance to public and private educational institutions. Comprehensive and innovative mechanics of support accompanied by proper safeguards and standards should be formulated for both public and private institutions. This will involve coordinating and integrating planning and implementation of programmes and enhancing the capability of institutions to develop academic and physical resource plans. Policy formulation and implementation will entail the participation of both the government and private sectors.

There should be a rationalization of programmes in the entire State-supported system of tertiary education. State colleges and universities, post-secondary technical institutes, and private institutions of higher learning should form an integrated tertiary educational system in the Philippines. The planned growth scheme should involve decongestion of the student population in major urban centres.

3. Financial assistance is to be given to poor but talented students and priority should be given to students from backward communities and depressed areas in the provision of grants and other financial incentives.
4. Entrance tests and admission schemes should be developed to facilitate entry of qualified and deserving students into tertiary education, channel students into courses where they can develop maximum learning capabilities, and minimize repetition and drop-out rates.
5. Private institutions of higher learning and State colleges and universities, particularly the UP system, should take a more dynamic role in upgrading higher education to promote the Philippines as an international centre of learning. As an apex of tertiary education in the Philippines, the facilities and programmes of UP in allied fields of agriculture, business, economics and the natural and physical sciences will be improved, while an integrated University of the Philippines campus in Iloilo based on food and marine sciences will be expanded. Specialized learning institutions improving economics, management, engineering and other social sciences will be supported and utilized in the development of a pool of higher-level and technical researchers, administrators, and executives in the country.
6. The policy of promoting science consciousness among the people will be vigorously pursued to develop the people's technical expertise in the basic or breeder sciences like mathematics, biology, and physics. Specifically, the provision of integrated scholarships and faculty development, research, and equipment improvement grants will be supported.
7. In this effort of regulation, a technical panel will count on the assistance not only of the regional planners, but also of the consumers of the graduates of this programme (employers).

These will then comprise the integrated education-employment information and regulation system. The integration will be of four types :

a. Whereas before State supported schools and private institutions went their separate ways, these technical panels of experts will govern both public and private institutions. This is especially appropriate in the Philippines where 85% of the institutions of higher learning are in the hands of the private sector.
b. These panels will also be integrated in the sense that their composition brings together both the school and the planning authorities as well as the employers of the graduates. Whereas before government and industry complained that the schools were not turning out the type of graduates needed, with these panels they can have a continuing dialogue as to the output desired in each of these programmes.
c. A third type of integration which up to this time has not been present will be that of the professional and the middle-level personnel requirements. The Philippines Commission to survey Philippines Education identified lack of technicians to support the professional agriculturists and industrialists as the most critical deficiency in the labour market.
d. The final and, to our mind, the most important type of integration will be the integration of school activities with that of the regional and national plans. This is not only extremely important, but it will be extremely difficult. A great amount of flexibility will have to be exercised by these panels.

There is especially one feature of the work of these panels which must receive special attention. Over the last few months, much has been written and said about the tariff barriers being imposed by developed countries on the exports of developing countries. This entire complex of the national and international economic situation will naturally affect the labour market demands and supplies of trained labour resources. Manpower forecasts have to take into account the changing phenomena. Also it appears that much of the exploitation of raw materials will now be done in the originating countries of these materials. This would mean a departure from the traditional assumptions in the manpower forecasting techniques and new types of management, administrative, and trading skills will be needed to respond to the new challenges.

8.3.4 PROGRAMMES

It is obvious that higher education has to be reformed, and this could be done in the following ways:

1. Work-related programmes have to be developed. This would lead to "sandwich courses" in the institutions of higher education, i.e. formal educational programmes integrated with work experience in all fields of studies. The work experience in liberal arts and social science will have to take due consideration of what the potential graduate wants to do after graduation.
2. Estimates of needs for skills have to be made and impacts upon the system of higher education have to be identified. These estimates may initially be limited but with the availability of better data as time passes they can be improved.
3. The structure of the labour market has to be analysed to identify how these estimates will have an impact upon it.
4. The functioning of the system of higher education has to be checked periodically so as to identify inconsistencies with respect to its capacity to respond to the changing needs of the society as perceived by the different groups of people concerned.
5. The data base that has been created in this study has to be updated so as to perform tasks (2), (3) and (4) mentioned above. Research into the problems of higher education has to be institutionalized with the close co-operation of the different governmental and private agencies concerned with the programmes of higher education.
6. The public and private sectors are integral components of the educational system and greater orchestration of efforts in the formulation, implementation, and evaluation of policies, programmes and projects will characterize the working relationship of these two sectors.
7. Links with other sectors must be strengthened and the use of mass media should be maximized to increase the outreach of training and information programmes. Better working partner-

ships with industry will provide additional opportunities for training of human resources and facilitate the transfer of technology.

8. A national infrastructure on research and development should be established. Selected public and private institutions should be tapped to conduct research and development work; research should be primarily geared towards the use of results as inputs to policy decision-making in both public and private sectors.
9. The system of educational planning, management, implementation and evaluation with emphasis on enhancing capability at the regional levels should be further improved and strengthened in response to growing needs and changing conditions.
10. More viable financing schemes should be formulated and adopted to support the requirements of the educational system. Local government participation in financing should be explored.
11. Since teachers are pivotal to the educational process, teachers' capabilities should be upgraded through adequate instructional materials and continuing in-service training. Regional priorities for teacher training will be established based on regional teaching capabilities and needs. To ensure the continued service of qualified teachers, better incentives such as higher compensation, certification, and testing schemes should be implemented. At the same time, teacher education curricula and present classroom practices should be reexamined to ensure that the educational output reflects the requirements of the service.
12. As more employment opportunities are created, human resource export should be increasingly restrained. The policy on overseas workers should be modified to integrate local labour, equipment and engineering expertise into contract packages. The rural service programme in the fields of medicine and engineering should be expanded to instil a spirit of service to the nation. "Brain drain" problems will require administrative reforms particularly in the provision of adequate salary incentives.

8.3.5 SOME PROBLEMS OF IMPLEMENTATION

It is now a consensus in the Philippines that a further strengthening of the above-mentioned technical panels can be undertaken. There is support from the Office of the President, from the newly organized legislative body wherein the executive and legislative functions of the government are now co-ordinated, and from the National Economic and Development Authority (NEDA).

What is needed is the identification of experts who will staff these different panels. The positions do not have to be full-time, necessitating absence from universities or other professional appointments; through brief leaves of absence these experts could make the necessary studies and visitations to applying institutions.

Presently there already exist panels or boards in the following areas :

1. Engineering
2. Agriculture
3. Technical education
4. Medicine
5. Pharmacy
6. Nursing
7. Accountancy

It will be comparatively easy for the Minister of Education and the National Board of Education to establish by department order the necessary panels or boards in other areas.

One may ask what happens now to a great number of members of the labour force of 15 years and up who possess some amount of college training but who are unemployed.

As was indicated earlier, there is great stress being placed today by government on the building of infrastructures necessary for development of all the regions of the country. It would be quite feasible to organize this unemployed but trained labour resource into cadres. These cadres could receive a minimum amount of retraining so that they can undertake some of the following tasks at hand :

1. Road building
2. Building of irrigation canals and dams
3. Reforestation of the very badly denuded forests
4. Building of schools, health centres, etc.

These will require on the part of government some special funds earmarked in the budget to undertake these projects, but the national consensus is such that the environment needs this immediate attention if further progress is to be made in the overall economy. After all, this kind of infrastructure is necessary if the contemplated improvement in technology in the farms and in the factories is to be realized.

Codes
Name: ________________________________ CARD NO. 1
Present Address: ________________________ 2– 6 ___
Permanent Address: ______________________ 7–11 ___
Name of School/College/University:
____ 12–15 ___
Address of School/College/University:
____ 16–19 ___
Course: __________________ Date: __________ 20–23 ___
____

HIGHER EDUCATION AND THE LABOUR MARKET : THE PHILIPPINES

STUDENT QUESTIONNAIRE

Objective:

This is a research project being undertaken by the Department of Education and Culture (*DEC*), the Educational Development Projects Implementing Task Force (*EDPITAF*), the National Manpower and Youth Council (*NMYC*), the Fund for Assistance to Private Education (*FAPE*), the National Economic Development Authority (*NEDA*) and the International Institute for Educational Planning (*IIEP*) at Paris, France to study the overall problem of education and employment in the Philippines. One of the more concrete outcomes of the study would be an information system which would be used in determining where and when employment opportunities exist in the labour market.

Instructions :

Please answer this questionnaire by filling the blanks or placing a check mark ( ) on the answer as the case may be. It would be of great help not to leave any question unanswered. Please be assured that the information gathered will be held in strictest confidence. Thank you.

1. Civil Status :				24	___
Single	( )1	Married	( )2		
Widowed	( )3	Legally separated	( )4		
2. Sex :				25	___
Male	( )1	Female	( )2		

3. Age (as of last birthday) : ______________ 26–27 ___

4. Citizenship : ______________________ 28–29 ___

5. Ethnic origin of parents : 30–31 ___

	Father	*Mother*	32–33 ___
Filipino	( )1	( )1	
Chinese	( )2	( )2	
American	( )3	( )3	
Spanish	( )4	( )4	
Don't know	( )5	( )5	
Others (specify)	______	______	

6. Dialect spoken at home in earliest childhood 34–36 ___
(Ex. Cebuano, Ilocano, Tagalog, etc.) ______________

7. Among your brothers and sisters, are you 37 ___
the eldest? ( )1
in between? ( )2
the youngest ( )3

8. a. Name of the High School where you graduated : 38–41 ___
______________________________ 42–45 ___

b. Complete address of this high school
____

9. a. What type of high school did you attend 46 ___
Public School (Proceed to § 10) ( )1
Private Sectarian School (Proceed to § 9b) ( )2
Private Non-Sectarian School (Proceed to § 10) ( )3

b. What type of a private Sectarian School was your high school? 47 ___
Catholic ( )1
Protestant ( )2
Muslim ( )3
Others (specify) ____

10. Was your high school a 48 ___
general secondary school? ( )1
barrio/barangay high school? ( )2
vocational high school? ( )3
science high school? ( )4

11. a. Have you taken any NCEE? 49 ___
Yes ( )1 (Proceed to 11b) No ( )2 (Proceed to 12)

b. What was your NCEE percentile score? ______ 50–54 ___

c. When did you take your NCEE? (indicate year only) 55–56 ___
____

12. Why did you go to college? Indicate the degree or importance of each of the following factors :

	Very Important	*Important*	*Not Important*		
a. To obtain a specific professional qualification	( )1	( )2	( )3	57	___
b. To enjoy scholarships/ grants	( )1	( )2	( )3	58	___
c. To study for its own sake	( )1	( )2	( )3	59	___
d. To obtain better employment opportunities	( )1	( )2	( )3	60	___
e. Others (specify)	( )1	( )2	( )3	61	___
___				62	___

13. a. Did you move out of your home province to pursue your college education? 63 ___

Yes ( )1 No ( )2
(Proceed to 13b) Proceed to 14

b. What was your most important reason for moving out of your home province to continue your college education? (Check one)

There was no college in the area	( )1	64	___
The college in the area did not offer your desired course	( )2		
The college in the area did not accept you	( )3		
The college in the area was not satisfactory	( )4		
My parents wanted me to go to another college	( )5		
My family moved residence	( )6		
Others (specify) ___			

14. a. Is the course you are taking now, the course you really wanted to take? 65 ___

Yes ( )1 No ( )2
(Proceed to 14b) (Proceed to 14c)

b. If yes, check the degree of importance of *each* of the following reasons which might have prompted you to choose the course.

	Very Important	*Important*	*Not Important*		
b1. Your guidance counsellor advised you so	( )1	( )2	( )3	66	___
b2. You were influenced by friends	( )1	( )2	( )3	67	___
b3. Family influenced your decisions	( )1	( )2	( )3	68	___

b4. The course has good employment opportunities	( )1	( )2	( )3	69	___
b5. The course gives wide choice of future careers	( )1	( )2	( )3	70	___
b6. The course gives social prestige	( )1	( )2	( )3	71	___
b7. Others (specify)	( )1	( )2	( )3	72	___

c. If no, check the degree of importance of each of the following factors which might account for the change :

	Very Important	*Important*	*Not Important*		
c1. Lack of financing	( )1	( )2	( )3	74	___
c2. Parents preferred the course	( )1	( )2	( )3	75	___
c3. Academic performance was not satisfactory	( )1	( )2	( )3	76	___
c4. Simply changed your mind	( )1	( )2	( )3	77	___
c5. Others (specify)	( )1	( )2	( )3	78	___
____________				79	___

15. Check the degree of importance of each of the following criteria in getting you admitted to your present course.

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	Very Important	*Important*	*Not Important*		
a. Academic performance	( )1	( )2	( )3	7	___
b. Aptitude tests or entrance exam.	( )1	( )2	( )3	8	___
c. Interview	( )1	( )2	( )3	9	___
d. Letter of recommendation	( )1	( )2	( )3	10	___
e. Ethnic/Religious background	( )1	( )2	( )3	11	___
f. Sex	( )1	( )2	( )3	12	___
g. Work Experience	( )1	( )2	( )3	13	___
h. Your previous school	( )1	( )2	( )3	14	___
i. Others (specify) ______	( )1	( )2	( )3	15	___
____________				16	___

16. Check the degree of importance of each of the following factors which influenced you in the choice of your school.

	Very Important	*Important*	*Not Important*		
a. National prestige (School is well-known)	( )1	( )2	( )3	17	___

b. Geographical proximity (School is near your residence)	( )1	( )2	( )3	18	___
c. Low tuition fees	( )1	( )2	( )3	19	___
d. The college offers the course I want	( )1	( )2	( )3	20	___
e. Religion	( )1	( )2	( )3	21	___
f. No admission requirement	( )1	( )2	( )3	22	___
g. Others (specify)	( )1	( )2	( )3	23	___
______________				24	___

17. How do you assess the importance of your high school education to your present course with respect to:

	Very Important	*Important*	*Not Important*		
a. content of instruction	( )1	( )2	( )3	25	___
b. method of instruction	( )1	( )2	( )3	26	___

18. Do you like the course you are taking now with respect to :

	Very Important	*Important*	*Not Important*		
a. meeting your career objectives	( )1	( )2	( )3	27	___
b. meeting your personal interest	( )1	( )2	( )3	28	___

19. a. Are you working now?

Yes Proceed to 19b	( )1	No Proceed to 20	( )2	29	___

b. Are you working as a paid employee?	( )1		
Self-employed?	( )2	30	___
Employer?	( )3		
Unpaid family worker?	( )4		
c. Are you working		31	___
Full-time? (40 hrs. or more a week)	( )1		
Part-time? (less than 40 hrs. a week)	( )2		
Occasionally? (including vacation)	( )3		

d. Approximately how much is your gross monthly income including allowances and other fringe benefits? P ______________ (Do not include scholarships/grants). 32–36 ___

20. If you were working instead of going to school, how much do you think would be your monthly income? P ______________ 37–41 ___

21. What is the main source of funds for your college/higher education? 42 ___

a. Government scholarship ( )1

b. Government loans ( )2
c. University scholarship ( )3
d. Family ( )4
e. Self-support ( )5
f. Other non-government sponsored scholarship ( )6
g. Other non-government sponsored loans ( )7
h. Relatives ( )8
i. Other sources ( )9

22. a. After completing your education, do you intend to seek employment in an occupation related to your course? 43 ____
Yes, permanently ( )1
Proceed to 23
Yes, but not permanently ( )2
Proceed to 22b
No ( )3
Proceed to 23

b. If you don't expect to be permanently employed in your present field, why do you remain in this field? (Check one) 44 ____
This field gives me good career preparation/experience ( )1
This field gives me wider choice of future career ( )2
It was a mistake to choose this field but it is too late to change ( )3

23. a. a1. What kind of work does/did your father do for a living? 45–47 ____
a2. Where is/was he employed? 48–50 ____
Name of Company : ____________________
Address of Company : ____________________
b. b1. What kind of work does/did your mother do for a living? 51–53 ____
b2. Where is/was she employed? 54–56 ____
Name of Company : ____________________
Address of Company : ____________________

24. a. What is your father's approximate gross *monthly* income from his major occupation? P ____________________ 57–61 ____
b. What is your mother's approximate gross *monthly* income from her major occupation? P ____________________ 62–66 ____

25. a. The advice you received in choosing your field of study was : 67 ____
Very satisfactory ( )1
Proceed to 26
Satisfactory ( )2
Proceed to 26
Not satisfactory ( )3
Proceed to 25b
b. If more detailed information had been available to you, would you have changed your field of study? 68 ____
Yes ( )1 No ( )2

26. To what extent did you depend on each of the following sources of information on career possibilities before you applied for college?

	Very much	*Reasonably*	*Not at All*		
a. Staff of your present school	( )1	( )2	( )3	69	____
b. Parents and relatives	( )1	( )2	( )3	70	____
c. Guidance counsellors of secondary schools	( )1	( )2	( )3	71	____
d. Other students (peers)	( )1	( )2	( )3	72	____
e. From previous employment you had in the field	( )1	( )2	( )3	73	____
f. General information sources like books, newspapers, radio etc.	( )1	( )2	( )3	74	____
g. Others	( )1	( )2	( )3	75	____
(Specify) ____________				76	____

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27. How would you assess your past academic performance in College/University. 7 ____

Excellent	( )1	(95 and above)
About Average	( )2	(86–94)
Average	( )3	(80–85)
Below Average	( )4	(75–79)
Poor	( )5	(Below 75)

28. How would you rank the following arrangements in making your education more responsive to the demand of your future occupation? Assign rank 1 to the most preferred arrangement and rank 6 to the least preferred.

a. Educational programmes completely separated from work-related programmes. (This is the present set-up in the country where-in work training is only undertaken after recruitment into a similar job). 8 ____

b. Formal educational programmes interrupted with related work experience. (This is commonly known as sandwich course where related work training is part of the educational programmes. This is sometimes required after the 1st two years of formal education). 9 ____

c. Formal educational programmes interspersed with related work experience. (Each year of attendance in the formal education programmes is interrupted by an equivalent year of related work experience. This is usually an application of what was learned in the formal education programme). 10 ____

d. Related work experience as a pre-requisite for entrance to college ( ) 11 ____

e. Related work experience as a requirement for graduation from college (YCAP) ( ) 12 ____

f. Teachers being required to refresh their knowledge with related field work experience ( ) 13 ____

29. Does your school have a job placement office? (a placement office is a special group which arranges the employment of its graduates). 14 ____

Yes ( )1 No ( )2

30. How would you rank the following placement arrangements for your employment after graduation? (Assign rank 1 to the arrangement you prefer most and rank 6 to the one you prefer least).

a. Placement office attached to each school or college ( ) 15 ____
b. One placement office for all universities ( ) 16 ____
c. Placement office attached to the Department of Labour ( ) 17 ____
d. Placement office at each academic department ( ) 18 ____
e. No placement office at all ( ) 19 ____
f. Others (specify) ______________________________ ( ) 20 ____

31. The following list gives four ways of obtaining better knowledge on conditions of work, promotion, prospects etc. Please rank them in the order of preference. (Assign rank 1 to the most preferred method and rank 5 to the least preferred).

a. Practical job experience during study course ( ) 21 ____
b. Personally getting information from prospective employers ( ) 22 ____
c. Reading advertisements ( ) 23 ____
d. Discussing with workers from particular fields ( ) 24 ____
e. Others (specify) ______________________________ ( ) 25 ____

32. In what sector do you expect to be permanently employed when you have finished your present studies? 26 ____

Government service ( )1
Self-employment (start your own business) ( )2
Government controlled/owned corporation ( )3
Private Firm ( )4

33. After graduation, how long do you think will you have to wait before you can get a job? 27 ____

Less than 3 months ( )1
3–6 months ( )2
7–12 months ( )3
more than 1 year ( )4
no idea ( )5

34. What occupation do you expect to have after completing your present course of studies?

a. One year after graduation ______________________ 28–30 ____
b. Three years after graduation ______________________ 31–33 ____

35. In what type of company do you expect to be employed after completing your present studies?

	a. One year after graduation	b. Three years after graduation	34 35	___ ___
Agriculture	( )1	( )1		
Mining and Quarrying	( )2	( )2		
Manufacturing	( )3	( )3		
Electricity, gas and water	( )4	( )4		
Construction	( )5	( )5		
Distributive and service trades	( )6	( )6		
Transport, storage and communication	( )7	( )7		
Financing, insurance, Real Estate and Business Services	( )8	( )8		
Community, Social Recreational and Personal Service	( )9	( )9		

36. What would make you work in the rural area? Please check the degree of importance of *each* of these factors (Consider all factors).

	Very Important	*Important*	*Not Important*		
a. Financial incentives	( )1	( )2	( )3	36	___
b. Promotion prospects	( )1	( )2	( )3	37	___
c. A post of greater responsibility	( )1	( )2	( )3	38	___
d. Chance to serve the rural people	( )1	( )2	( )3	39	___
e. Opportunity of a free life	( )1	( )2	( )3	40	___
f. Others	( )1	( )2	( )3	41	___
(Specify) ________	( )1	( )2	( )3	42	___

37. What would discourage you from taking a job in a rural area? Please check the degree of importance of each of these factors (Consider all factors)

	Very Imoprtant	*Important*	*Not Important*		
a. Lack of tap water, electricity, etc.	( )1	( )2	( )3	43	___
b. Communication and transport difficulties	( )1	( )2	( )3	44	___
c. Separation from friends and relatives	( )1	( )2	( )3	45	___
dd. Belief that rural life is dull and slow	( )1	( )2	( )3	46	___
e. No scope for improving competence	( )1	( )2	( )3	47	___

f. Possible delay in promotion	( )1	( )2	( )3	48	___
g. Lack of opportunities for further studies	( )1	( )2	( )3	49	___
h. Others (specify)	( )1	( )2	( )3	50	___
___________	( )1	( )2	( )3	51	___

38. How important do you think are each of these factors in making your job satisfactory. (Consider all factors).

	Very Important	*Important*	*Not Important*		
a. Use of special talents	( )1	( )2	( )3	52	___
b. Creative work	( )1	( )2	( )3	53	___
c. Opportunities for further studies	( )1	( )2	( )3	54	___
d. Improve competence	( )1	( )2	( )3	55	___
e. Helpful to others and society	( )1	( )2	( )3	56	___
f. Good income	( )1	( )2	( )3	57	___
g. Opportunity to travel	( )1	( )2	( )3	58	___
h. Better prospects for promotion	( )1	( )2	( )3	59	___
i Secure future	( )1	( )2	( )3	60	___
j. Time for family and hobbies	( )1	( )2	( )3	61	___
k. Work environment	( )1	( )2	( )3	62	___
l. Self-fulfilment	( )1	( )2	( )3	63	___
m. Others (specify)	( )1	( )2	( )3	64	___
___________				65	___

39. What do you expect to be your gross earning per month when you have finished your course?

a. At the start of your career P ______________ 66–70 ___

b. After five years P ______________ 71–75 ___

c. After ten years P ______________ 76–80 ___

40. Give the name and address of a friend or relative who will know where you will be after graduation.

____

____

____

______________________	______________________
Name of Establishment	Industry Code
______________________	______________________
Official Designation	Date of Accomplishment

HIGHER EDUCATION AND LABOUR MARKET STUDY: THE PHILIPPINES

EMPLOYED GRADUATE QUESTIONNAIRE

Objective:

This is a research project being undertaken by *EDPITAF, NMYC, FAPE, DEC* and the International Institute for Educational Planning (*IIEP*) at Paris, France, to study the overall problem of education and employment in the Philippines. One of the more concrete outcomes of the study would be the information system which would be used in determining where and when employment opportunities exist in the labour market.

Instructions:

Please answer this questionnaire to the best of your ability. It would be of great help not to leave any question unanswered. Please be assured that this questionnaire will be held in strictest confidence.
Thank you.

1. Name : ______________________________
2. Present address : ______________________________
3. Permanent address : ______________________________
4. Sex : Male ( )1 Female ( )2
5. Citizenship : ______________________________
6. Civil Status :

Single	( )1	Widowed	( )2
Married	( )3	Legally Separated	( )4

7. Ancestral Origin of Parents :

	Father	*Mother*
Filipino	( )1	( )1
Chinese	( )2	( )2
American	( )3	( )3
Spanish	( )4	( )4
Don't know	( )5	( )5
Others (specify)	________	________

8. Dialect spoken at home in earliest childhood (E.g. Cebuano, Ilocano, Tagalog, etc.) ____________________

9. Sibling rank :

eldest ( )1 in-between ( )2
youngest ( )3

10. Do you live :

in your parent's house ( )1
in a house provided by employer? ( )2
in a house you rent? ( )3
in a house you own? ( )4
in a house of a friend or relative? ( )5
Others (specify) ____________

11. If you are married :

a. Indicate age of spouse ____________________
b. What is the highest educational attainment of your spouse ____________________
Major (if any) ____________________
c. What is your spouse's occupation and industry (mining, manufacturing, etc.)?
Occupation : ____________________
Industry : ____________________
(Use the industry grouping as appended)
d. What is your spouse's approximate gross monthly income? (before tax deductions) P ____________________
e. How many children do you have?
Boys ________ Girls ________ Total ________
State their ages : ____________________

12. a. What is the highest educational attainment of your parents?

Father ____________ Major (if any) ________
Mother ____________ Major (if any) ________

b. State your parents' occupation and industry.

	Father	*Mother*
Occupation :	________	________
Industry :	________	________

c. Parent's approximate gross monthly income (before tax deductions).

Father P ____________
Mother P ____________

13. Are you the sole bread-earner of your household?

Yes ( )1 No ( )2
Proceed to 16

14. State the number of dependents you have ____________________

Education and Training

15. Educational background

Level	Name of School	Address	Degree Certificate	Year obtained	Honours
Elementary					
Secondary					
Voc./Tech.					
College					
Grad. Studies					

16. Is the course you finished, the course you really wanted to take?

Yes	( )1	No	( )2
Proceed to a		Proceed to b	

a. If yes, which of the following factors prompted you to choose this course.

The course promised good employment opportunities	( )1
The course gives a wide choice of future careers	( )2
The course gives social prestige	( )3
You were influenced by friends	( )4
Your family influenced your decision	( )5
Others (specify) ______________	( )

b. If no, which of the following reasons prompted you to choose this course

Lack of financing	( )1
Parents preferred this course	( )2
Academic Performance in the past not satisfactory	( )3
Simply changed your mind	( )4
Others (specify) ______________	( )

17. What was the main source of funds for your college/higher education?

Government scholarship	( )1
Government loans	( )2
University scholarship	( )3
Other non-government loan	( )4
Family	( )5
Self-support (employment, savings, etc.)	( )6

18. How would you rank the following arrangement in making education more responsive to the demands of one's occupation? (Select and rank any 3 which you would personally prefer). Assigning a rank of 1 in the most preferred arrangement and a rank of 3 least preferred.

a. Educational programmes completely separated from work-related programmes ( )

(This is the present set-up in the country wherein work training is only undertaken after recruitment into a certain job).

b. Formal educational programmes interrupted with related work experience ( )
(This is commonly known as sandwich course where related work training is part of the educational programmes. This is sometimes required after the 1st two years of formal education).

c. Formal educational programmes interspersed with related work experience ( )
(Each year of attendance in the formal education programmes is interrupted by an equivalent year of related work experience. This is usually an application of what was learned in the formal education programmes).

d. Related work experience as a pre-requisite for entrance to higher education ( )

e. Related work experience as a requirement for graduation from higher education (office, apprenticeship) ( )

f. Teachers or instructors being required to refresh their knowledge with related field work experience. ( )

g. Others (specify) ____________________________________ ( )

19. How do you assess your performance in college?

poor	(Below 75%)	( )1
below average	(75–79%)	( )2
average	(80–85%)	( )3
above average	(86–94%)	( )4
excellent	(95 & above)	( )5

20. How do you assess the quality of education you obtained with respect to:

	Excellent	*Very Adequate*	*Adequate*	*Barely Adequate*	*In-adequate*
a. content of instruction	( )1	( )2	( )3	( )4	( )5
b. method of instruction	( )1	( )2	( )3	( )4	( )5

21. Aside from your formal education, did you have any other vocational/technical/craft/in-service training?

Yes	( )1
No (Proceed to 23)	( )2

22. If yes, please fill in the following table:

Course/Name of Training Programme	Institution/Agency which conducted the training	Place	Date	No. of training hours
1.				
2.				
3.				
4.				
5.				

III. *Employment Particulars*

23. State the name and address of the firm/organization in which you are employed :

____

____

24. Is this firm/organization :

National government	( )1
Provincial government	( )2
Local government/city	( )3
Government controlled	( )4
Private Corporation	( )5
Private partnership	( )6
Private single proprietorship	( )7

25. What is your present occupational/industrial classification (mining, manufacturing, etc.)?
a. Occupational Classification : ____________________
b. Industrial Classification : ____________________

26. What is your present average monthly salary before tax deduction?
P ____________

27. Do you have other sources or income?

Yes ( )1 No ( )2

If yes, indicate the nature and approximate monthly income before tax deductions.

Kind/Nature of Job	Name of Company/ Institution	Address	Approximate monthly income before tax deductions

28. Is this your first employment?

Yes ( )1 Proceed to 30

No ( )2

29. If no, please list down your previous work experience:

Position or Official Designation	Inclusive years of employment	Name and address of Establishment	Monthly Salary
1.			
2.			
3.			
4.			
5.			

30. How long did it take you to land your first job?

a. After finishing your course

__________Years __________Months __________Weeks

b. After actively looking for work

__________Years __________Months __________Weeks

31. If you think it took you too long to find a job after looking for one, what in your judgement is/are the reason(s) for this delay?

( ) salary offer too low

( ) working conditions not satisfactory

( ) little or no opportunity for advancement
( ) job too far from home
( ) no job opportunities

32. Indicate the degree of importance of the following factors in helping you get your first job.

	Extra-ordinarily Important	*Very Important*	*Important*	*Barely Important*	*Not Important*
a. through school placement office	( )1	( )2	( )3	( )4	( )5
b. Government employment office	( )1	( )2	( )3	( )4	( )5
c. Media advertising	( )1	( )2	( )3	( )4	( )5
d. Recommendations from relatives/friends	( )1	( )2	( )3	( )4	( )5
e. Recommendations from former teachers/ instructors	( )1	( )2	( )3	( )4	( )5
f. Personnel office of the hiring company	( )1	( )2	( )3	( )4	( )5
g. Others (specify) ______________	( )1	( )2	( )3	( )4	( )5

33. To what extent do you think was your educational qualification necessary for getting your present job?

Extraordinarily necessary ( )1
Very necessary ( )2
Necessary ( )3
Barely necessary ( )4
Not necessary ( )5

34. Do you find your formal training in school as shown in number 15 useful in relation to the needs of your present job?

Extraordinarily useful ( )1
Very useful ( )2
Useful ( )3
Barely useful ( )4
Not useful ( )5

35. Do you find your training as shown in number 22 useful in relation to the needs of your present job?

Extraordinarily useful ( )1
Very useful ( )2
Useful ( )3
Barely useful ( )4
Not useful ( )5

36. Which one is more useful as far as your present job is concerned?
Formal training in number 15 more useful than number 22 ( )1
Training in number 22 more useful than in number 15 ( )2
Formal training in number 15 is equally useful as training in number 22 ( )3
Cannot say ( )4

37. Are you satisfied with your present job?
Yes ( )1 Proceed to 39
No ( )2

38. What are the reasons for your dissatisfaction?
a. poor working conditions ( )
b. unable to apply school training ( )
c. poor prospects for promotion ( )
d. not suited to personal objectives ( )
e. not enough opportunities for self-fulfilment ( )
f. cannot get along well with co-workers ( )
g. others (specify) ____________________

39. Why are you satisfied with your present job? (Indicate the degree of importance of the following factors).

	Extra-ordinarily Important	*Very Important*	*Important*	*Barely Important*	*Not Important*
a. able to utilize talents	( )1	( )2	( )3	( )4	( )5
b. scholarship opportunities	( )1	( )2	( )3	( )4	( )5
c. good income	( )1	( )2	( )3	( )4	( )5
d. good prospect for career advancement promotion	( )1	( )2	( )3	( )4	( )5
e. opportunity to travel	( )1	( )2	( )3	( )4	( )5
f. ample time off for family and hobbies	( )1	( )2	( )3	( )4	( )5
g. self-fulfilment	( )1	( )2	( )3	( )4	( )5
h. offers secure future	( )1	( )2	( )3	( )4	( )5
i. good employee relationships	( )1	( )2	( )3	( )4	( )5
j. others (specify) ____________	( )1	( )2	( )3	( )4	( )5

Please give your name and the address where you can be contacted for future reference.

____

____

Date : ____________________

Name of Establishment/Firm	Inventory Code
Address of Establishment/Firm	Date of Accomplishment
Official Designation of Interviewee	

HIGHER EDUCATION AND LABOUR MARKET STUDY : THE PHILIPPINES

EMPLOYER QUESTIONNAIRE

Objective :

This is a research project being undertaken by *EDPITAF, NMYC, FAPE, DEC* and the International Institute for Educational Planning (*IIEP*) at Paris, France to study the overall problem of Education and employment in the Philippines. One of the more concrete outcomes of the study would be an information system which would be used in determining where and when employment opportunities exist in the labour market.

Instructions :

Please answer this questionnaire to the best of your ability. It would be a great help not to leave any question unanswered. Please be assured that the answers will be held in the strictest confidence. Thank you.

1. Type of establishment
    - Government
        - ☐ National government
        - ☐ Provincial government
        - ☐ Local government
        - ☐ Government controlled/owned corporation
    - Private
        - ☐ Single proprietorship
        - ☐ Partnership
        - ☐ Corporation
2. Year of Establishment : ____________________
3. Ownership
    - ☐ All Filipino ☐ With Foreign Equity

4. What is the main economic activity of your establishment/firm?
   - ☐ Agriculture
   - ☐ Mining and quarrying
   - ☐ Manufacturing
   - ☐ Electricity, gas and water
   - ☐ Construction
   - ☐ Wholesale and retail
   - ☐ Transport, storage and communication
   - ☐ Financing, insurance, real estate and business service
   - ☐ Community, social and personal services

5. Please rank the following recruiting methods according to their degree of effectiveness in the recruitment of your qualified personnel. (Rank from 1 to 7. Assign rank 1 to the most effective method and rank 7 to the least effective).

   ______ Through school employment exchange office
   ______ Through government employment office
   ______ Private placement office
   ______ Media advertisement
   ______ Recommendations from relatives and friends
   ______ Gate hiring/personal application
   ______ Others (specify) ________________________________

6. Over the year or two, how many employees were hired through

   ______ School employment exchange office
   ______ Government office
   ______ Private placement office
   ______ Media advertisement
   ______ Recommendations from relatives/friends
   ______ Gate hiring/personal application
   ______ Others (specify) ________________________________

7. Please rank the following considerations in the order of their importance in your recruitment process as per occupational groupings shown below. (Rank from 1 to 10. Assign rank 1 to the most important consideration and 10 for the least important).

a. For administrative, managers, executive and managerial work.

CONSIDERATIONS	RANK For position requiring at least a bachelor's degree
a. Academic record	
b. Aptitude test results	
c. Interview results	
d. Work experience	
e. Letters of recommendation	
f. Social, personal relationships	
g. Physical appearance	
h. Civil status	
i. Sex	
j. Others (specify)________	

b. Clerical, salesmen and related workers

CONSIDERATIONS	RANK For position requiring at least a bachelor's degree
a. Academic record	
b. Aptitude test results	
c. Interview results	
d. Work experience	
e. Letters of recommendation	
f. Social, personal relationships	
g. Physical appearance	
h. Civil status	
i. Sex	
j. Others (specify)________	

c. Craftsmen, factory operatives and workers in related occupations

CONSIDERATIONS	RANK For position requiring at least a bachelor's degree
a. Academic record	
b. Aptitude test results	
c. Interview results	
d. Work experience	
e. Letters of recommendation	
f. Social, personal relationships	
g. Physical appearance	
h. Civil status	
i. Sex	
j. Others (specify)__________	

8. Do you have difficulty in recruiting college graduates for job openings?
   ☐ Yes ☐ No
   (If no, please proceed to item 9)

9. If you find difficulty in recruitment, please rank the following possible reasons which may account for this difficulty. Assign rank 1 to the reason which contributes greatly to the problem and rank 4 to that which contributes the least.
   ______ No linkage/contact between educational institutions and establishment/firm
   ______ Lack of qualified manpower in the area
   ______ Unable to keep up with salary scale of other establishments
   ______ Others (specify) ____________________

10. Do you offer pre-employment training for new recruits to fit them better to the needs of your establishment?
    ☐ Yes ☐ No

11. Do you offer in-service training for employees to fit them better to the needs of your establishment?
    ☐ Yes ☐ No

12. If you do not offer employment training, do you intend to start one?
☐ Yes ☐ No
Why? ______________________________
When? ______________________________

13. Do you send your staff abroad for training?
☐ Yes ☐ No

14. How would you rank the following placement arrangements for employment purposes of new graduates? (Rank 1 to 6; assign rank 1 to the arrangement you prefer most and rank 6 to the one you least prefer).
_____ Placement office attached to each academic department of the school in your area
_____ One central placement office for each school
_____ Government placement office
_____ Trade union placement office
_____ No need for placement office
_____ Others (specify) ______________________________

15. Rank the following factors in deciding a recruit's starting salary/starting position according to their degree of importance. (Rank 1 to 12. Assign rank 1 to the most important factor and rank 12 to the least important).

Factors	Starting Salary	Starting Position
a. Academic record		
b. Type of school		
c. Specialization		
d. Entrance exam results		
e. Previous salary/position		
f. Work experience		
g. Age		
h. Civil status		
i. Sex		
j. Social, personal relationship		
k. Personality		
l. Others (specify) ______________		

16. Do you offer summer jobs to students to enable them to gain practical experience?
☐ Yes ☐ No

17. What factors do you think are important to employees in making their jobs satisfactory? (Assign 1 to a factor which is extraordinarily important and 5 to a factor which is not important)

	Extra-ordinarily Important	*Very Important*	*Important*	*Barely Important*	*Not Important*
a. Use of specialization	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
b. Opportunity to travel	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
c. Opportunity for further studies & development	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
d. Lucrative income	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
e. Better prospects	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
f. self-fulfilment	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
g. Utilization of special talents	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
h. Security of tenure	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
i. Good working environment	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
j. Others (specify) ____________	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Bibliography

Anastasi, Anne, *Psychological Testing*, 3d. ed., London, Macmillan, 1968.

Department of Education and Culture, National Testing Center, *Trend of Post-Secondary Freshmen Enrolment in Degree Programmes requiring at least four years of Academic Study and in Vocational/Technical Courses from school-year 1973-74 to 1974-75*, vol. 1, No. 12, Manila, June 1976.

Department of Labour, *1977 Yearbook of Labour Statistics*, Manila, September 1977.

Department of Labour, *Overseas Employment*, Statistical Bulletin, vols. 1 to 3., Manila.

Gumban, Remigio S. and Iledan Basilio R., "Some Predictive Validities of the College Entrance Test Based on a Relatively Homogeneous Group of Schools". Research Bulletin GTD-RB-71-2, Makati, Rizal, Fund for Assistance to Private Education, July 1971.

Hunter, Guy, *Education for Developing Regions*, London, George Allen & Unwin, 1963.

Harbison and Myers, *Education, Manpower and Economic Growth: Strategies for Human Resource Development*, New York, McGraw-Hill, 1964.

H.E.R.C., *Higher Education in the Philippines (1970-71)*, A study conducted by the H.E.R.C. of the Committee on Education of the Philippines Senate, Manila, 1972.

International Labour Office, *Sharing in Development: A Programme of Employment, Equity and Growth for the Philippines*, Geneva 1974.

Jurado, Elsa, The Philippines Experts' Views of the World in the Year 2000.

Jurado, Gonzalo M, Ruperto Alouzo and Adriano Arcelo, "Manpower Demand and Supply" in *FAPE Review*, vol. 8, No. 2, Manila, 1977.

Kerr, Rebecca C., "The Validity of the CET in Predicting the Academic Performance of De La Salle College Freshmen in the First Semester of the School year 1971-1972." Unpublished Study, De La Salle College, 1972.

Mahar, Mangahas, and Jaime, Quizon, "The Philippines in the Year 2000; Implications for Higher Education" in *FAPE Review*, vol. 8, No. 2, Manila, 1977.

Mahar, Mangahas, and Jaime, Quizon, "The Philippines in the Year 2000; Implications for Higher Education" in *FAPE Review*, vol. 8, No. 2, Manila, 1977.

Maniquis, Patria Ora, "A Relationship of FAPE College Entrance Test Scores with the High School Achievement of Admitted Students to the College of Science, University of Santo Tomas," Unpublished Master's Thesis, University of Santo Tomas, October, 1974.

Ministry of Education and Culture, *Report of the Presidential Commission to Survey Philippines Education (PCSPE)*, Manila, 1970.

Ministry of Education and Culture, *Towards the Integration of Higher Education in the Philippines*, Final Report of the Presidential Committee on State Higher Education, Manila, March 1976.

National Economic Development Authority, *Five-Year Philippines Development Plan 1978-1982*, Manila, September 1977.

National Census and Statistics Office, *1970 Census of Population and Housing: National Summary*, Manila 1974.

——— *1975 Integrated Census of the Population and its Economic Activities:* National Summary (unpublished).

———, *National Sample Survey of Households Bulletin*, S. 47, August 1976, (unpublished data).

———, *The BCS Survey of Households Bulletin*, October 1965.

———, *Family Income and Expenditure Survey 1975*, (Special Release No. 191, Manila, 20 April 1977).

National Manpower and Youth Council, *National Manpower Plan 1978-82* (unpublished).

———, *The Ranis Mission Report: A Re-evaluation*, Quezon City, 1975.

Ravelo, Antonio D., "An Institutional Validity and Utility Study of the College Entrance Test in a Provincial College," Unpublished Master's Thesis, University of Santo Tomas, 1972.

Soriano, Emmanuel, *The Philippines in the Year 2000* (mimeo.).

Tan, Edita, *Careers of the College Educated*, IEDR Discussion Paper No. 76-14, Quezon City, 1976.

Sanyal, Bikas C. and El-Sammani A. Yaoub, *Higher Education and Employment in the Sudan*, IIEP/Unesco, Paris 1975.

Sanyal, Bikas C., John Case, Philip S. Dow and Mary E. Jackman, *Higher Education and the Labour Market in Zambia: Expectations and Performance*, Unesco Press and University of Zambia, Paris 1976.

Sanyal, Bikas C., and Jan Versluis, *Higher Education, Human Capital and Labour Market Segmentations in Sudan*, IIEP and ILO Joint Occasional Paper, IIEP, Paris, April 1976.

Sanyal, Bikas C., and Michael J. Kinunda, *Higher Education for Self-Reliance: The Tanzanian Experience*, Unesco/IIEP, Paris, 1977.

Sanyal, Bikas C., and Adam Jozefowicz (Eds.), *Graduate Employment and the Planning of Higher Education in Poland*, Unesco/IIEP, Paris, 1978.

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Inquiries about the Institute should be addressed to:
The Director, IIEP, 7-9 rue Eugène-Delacroix, 75016 Paris

Higher Education and the Labour Market in the Philippines

B.C. Sanyal, W.S. Perfecto, A.A. Arcelo

"Higher Education and the Labour Market in the Philippines (HELMS)" deals with the factors that determine the pursuit of education, how such education is financed, how the graduates are recruited for employment in the labour market and how they fare in the labour market. It also examines to what extent their training is utilized on the job, to what extent education determines the salary structure, what are the gaps between the expectations and actual achievements of students, graduates and employers in respect of the education and employment systems, and how the system of education could be more closely related to the economic needs for skills.

These are some of the questions that have been dealt with in the study, which attempts to combine quantitative and qualitative aspects of the relationship between education and the world of work.

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